



CORPORATION OF GLASGOW

REPORT

OF THE

Medical Officer of Health
City of Glasgow

1937

ORDERED BY THE COMMITTEE ON HEALTH TO BE PRINTED

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GORBALS CLINIC, FLORENCE STREET



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PREFACE

It is customary to preface the Annual Report by a brief reference to some of its principal contents. These may be grouped under two main heads, (a) population and vital statistics, and (b) the health services administered by the Department.

The population of the City is estimated by the Registrar-General at 1,119,863 persons. It was customary in past years to make an independent local estimate, but the factors on which it was based have now become too uncertain to be reliable, and would be largely a matter of guess work. Consequently, the Registrar-General's estimate has been for the first time adopted for local statistical purposes. On the basis of this calculation, the population has increased by 31,402 persons since the census was taken in 1931, which means that the City has grown since then at the comparatively slow rate of about 4,500 persons per annum. Whether or not this rate of growth is near the truth will not be known until the 1941 census has been taken. The extension of the City boundaries, approved during 1937 to come into effect on 26th May, 1938, adds 9,681 acres to the size and 5,171 persons to the population of the City.

The population is housed in 277,726 houses, which is equivalent to an average of 3.9 persons per house. In 1931 the number of occupied houses was 261,179, an increase of 16,547 since the last census. The number of unoccupied houses was 1,348, of which only 480, or 36 per cent., were of three apartments and under. This low figure indicates that there is continued pressure on accommodation in the smaller houses of the City.

The broad vital statistics, *i.e.*, birth-rates and death-rates, have shown little change for some years. The birth-rate in 1937 was 19.8 per thousand persons. Its fluctuations have been small during the past few years, and it would appear that the steady downward trend of the birth-rate from the seventies of last century (36.6 in the decade 1871—1880) has been replaced by a relatively stationary rate. The same feature characterises the general death-rate, which was 14.6 per thousand in 1937, practically the same as the figure 14.7 for 1936. This rate also has remained steady at between

14 and 15 per thousand of the population for some years past. Thus, the present trend of the vital statistics is towards a stationary birth-rate and a stationary death-rate. In view of the anxious regard recently paid to falling birth-rates, any tendency to an arrest of the decline becomes an important fact. A stationary death-rate means that the saving of life at the earlier ages of life, which has been so prominent a feature of the present century, is being offset by the increasing mortality at the later ages of life, to which more people now survive. A measure of the increased longevity of the population is the fact that between 1881 and 1931 the expectation of life at birth of male children has increased by 16.1 years and of female children by 17.5 years.

The principal causes of death, apart from fluctuations due to epidemics, affect the population mostly at the extremes of life. Among older people, deaths from heart disease and circulatory disorders were more numerous; on the other hand, affections of the lungs, malignant disease, and diseases of the nervous system were less numerous than in 1936. As regards the infectious diseases, a feature of the year was an epidemic of influenza in the early months, which caused 496 deaths among the old and the young, the highest figure for influenza since 1926. Outbreaks of enteric fever have recently attracted much public attention; in Glasgow in 1937 there were only 71 cases and five deaths. Among the infectious diseases of children, whooping-cough was responsible for 285 deaths, diphtheria for 116 deaths, scarlet fever for 29 deaths, and measles for 29 deaths. The diarrhoeal diseases of children under two years were more prevalent than usual, but less so than in 1936. There is now evidence that the increased incidence of intestinal infections which began in 1935 may be regarded as a passing phenomenon.

The death-rate from pulmonary tuberculosis was 8.5 per thousand of the population, the lowest figure in any year with the exception of 1934. It may be pointed out, however, that the general phthisis death-rate, although a quarter of what it used to be, has moved little during the past ten years. At ages under 15 and over 25 years, the fall has continued, but among females between 15 and 25 years the rate has tended to increase, while notifications among this age group have risen from 501 to 609 in the past five years. On the other hand, the rate for non-pulmonary tuberculosis, 0.21 per thousand, is the lowest yet recorded. A measure of the decline in the incidence of these forms of tuberculosis, affections of the bones, joints, etc., is afforded by the fact that 1,100 cases were notified in 1927 and 642 in 1937.

The infant mortality rate was 104 per thousand births. It was lower than that for the preceding year (109), and was just equal to the average rate for the past ten years. This rate cannot be regarded as satisfactory; improved housing and better mothercraft are the two main social factors likely to influence it for the better. Deaths from immaturity still occupy a prominent place, while infant life was affected adversely by the epidemic of influenza in the early part of the year as well as by the epidemic of whooping-cough during the first six months. Deaths from intestinal affections were also somewhat higher than usual.

The maternal mortality rate reached its lowest figure so far; it was 4.9 per thousand births, which may be compared with 4.8 for Scotland and with 5.9 for 1936. This fall is specially due to a smaller death-rate from puerperal infections.

The Report reviews the various branches of public health administered by the Department under the headings of Maternity and Child Welfare, Welfare of the Blind, Infectious Diseases, Venereal Diseases, the work of the Port Local Authority, Housing, the Bacteriological Laboratory, control of Food Supplies, Air Purification, General Sanitary Operations, including the reports of the Divisional Sanitary Inspectors, the Fever and Tuberculosis Hospitals, the General Hospitals, the Outdoor Medical Services and Clinics, and the Service for Lunacy and Mental Deficiency. The reports of the Medical Superintendents of the various hospitals are incorporated. The Annual Report of the Education Health Service is issued separately, as it coincides with the school year, which terminates at the end of June.

These various headings indicate the wide scope and ramifications of the work which now falls to a modern health department in giving effect to public health legislation and to the environmental, preventive, and remedial services which it is expected to administer. The work performed by each of these branches is described in the Report, and it is impossible to refer to it in any detail. Questions of general policy have mainly centred round the development of the newer and more rapidly growing services, *i.e.*, the hospital and clinic systems, especially those for which the Corporation was made responsible under the Local Government (Scotland) Act, 1929.

The general hospital accommodation is being gradually re-organised. The Southern General Hospital, a transferred mixed hospital and poorhouse, is now occupied by hospital patients alone.

Alterations are proceeding for the conversion of the old poorhouse section into beds for the accommodation of 500 patients. The operating theatre has been brought up to date. A new outdoor clinic for various ordinary and special purposes has been completed and is now functioning. A new X-ray department is being fitted. The maternity accommodation has been re-arranged and brought up to date, and will comprise 31 maternity beds, 36 ante-natal beds, and 36 gynæcological beds. At Stobhill Hospital a complete medical teaching unit has been arranged under Professor Morris, the Professor of Materia Medica and Therapeutics, in collaboration with the University, while the erection of a biochemical laboratory at a cost of £4,000 has been approved and is being proceeded with. Plans have been prepared for a new nurses' home to accommodate about 200 nurses, and a new children's hospital to accommodate 250 children. The electro-medical department has been re-equipped.

The medical staff of the hospitals and the staff of visiting specialists have been again strengthened. At the various hospitals and clinics the dental service is now on a whole-time footing. As the hospital position is changing from year to year, the following table is given to show the present accommodation in the various general hospitals and the main purposes for which the accommodation is used:—

	Total Accommo- dation.	Medical Surgical and Special.	Mental Observa- tion.	Maternity.		Sick	Healthy
				Beds.	Cots.	Children.	Children.
Stobhill Hospital ...	1,867	1,135	278	70	56	160	168
Marion Reid Home	70	—	—	—	—	—	70
Eastern Dist. Hosp.	327	237	50	18	22	—	—
Western Dist. Hosp.	294	230	—	32	32	—	—
Southern Gen. Hosp.	1,607	968	128	32	34	55	—
	4,165	2,570	456	152	144	215	238

The number of patients admitted to hospital has increased since 1931 by 33 per cent. Although this number of beds is available, the demand cannot yet be met without overcrowding of wards and without the setting up of a waiting list during times of pressure in the winter months. Still less is it possible to overtake the known deficiency for certain special purposes. A weakness in the system is the lack of sufficient outdoor treatment and consultation facilities; accordingly, plans for these are in preparation at the Eastern District Hospital, where they are most needed. In the meantime, a clinic for the supervision of patients with heart disease, anæmia and diabetes has been set up under the guidance of Professor Morris, as also one for surgical affections.

The Outdoor Medical Service for the sick poor has developed further on a whole-time basis. Most of it is now so conducted. The medical staff numbers 29 whole-time officers and 8 part-time officers, along with 20 nurses. The increasing use that is made of this service is shown by the following comparative figures:—

			Visits.	Consultations.
1931	...	...	23,230	113,217
1937	...	...	72,858	302,560

Apart from the increased demand on this medical service, it may be pointed out that one of the effects of its establishment has been to enable a better selection of patients for hospital than was formerly possible, with a corresponding saving in hospital beds. In the general working of this scheme, difficulties have arisen over the determination of fitness for work, which brings the service into close relation with the decisions made under the National Health Insurance Act and on behalf of the Unemployment Assistance Board, and measures have recently been taken to improve this branch of the service in collaboration with these two bodies and with the Department of Health for Scotland.

With the opening of an Outdoor Clinic at Florence Street on the South-side and the provision of a new Clinic at Redan Street in the East, all the older unsatisfactory premises have disappeared. The medical and nursing staffs work at and from eleven clinics in the City; new premises are under consideration, being planned or are being finished in seven other areas in view of the continued expansion of housing activities and the displacement of population.

This clinic system is, wherever possible, being amalgamated with the other statutory services, those for the treatment of school children and those required for maternity and child welfare. The growth of new housing areas and consequent creation of new populations is raising corresponding clinic and welfare problems regarding the form which new provision should take and where such provision should be located. It is not easy to determine what type of service in these respects new housing areas require, but in the meantime the question of suitable sites is being considered tentatively along with the Director of Housing, as also the relationship of the "health centre" to the community centres which are now under consideration. Thus, the services that are in their most fluid states are those through which personal contact is made with individual members of the community, through the hospital, the clinic and the welfare centre.

The mental hospitals and institutions are gradually undergoing the readjustment and extension required because of overcrowding in their wards and because of the increased demand, especially for the senile mental disorders. The 200 beds added to Hawkhead have been fully available for some time. Stoneyetts Hospital began to be occupied in August, 1937. It will, in the meantime, accommodate 210 patients, but will be extended later to 450 beds. A new nurses' home at Gartloch is under construction, and arrangements are being made to augment the accommodation for patients by a further 300 beds. Because of these and other readjustments of accommodation, it has been possible to reduce the numbers boarded-out in other mental hospitals throughout the country. There were 657 patients in these outside institutions at the end of the year. The new buildings at Woodilee Mental Hospital to replace those condemned, and to accommodate 124 patients, are in course of erection and should be available next year. It is anticipated that these various additions to the accommodation should go a long way towards making the Corporation independent of accommodation other than in its own institutions.

As regards mental deficiency, a gradual transference of patients has been effected to Lennox Castle Institution from the various general hospitals, from Caldwell House, and from certain outside institutions. It now has 988 defectives in residence. Caldwell House is at present used entirely for ineducable children. In all these rearrangements the problem of the educable child defective still remains, and negotiations are proceeding in respect of them with certain outside institutions.

To complete the picture, the mental observation wards in the general hospitals dealt with almost 1,700 patients, an increase over the previous year. The accommodation for early mental disorders has been increased in recent years in accordance with the definite policy that patients with early declared mental disorders should be treated in mental units attached to general hospitals without having to be certified and sent direct to asylums. Of the patients admitted in 1937, some 53 per cent. were discharged well or were sufficiently recovered to go home. These mental observation wards are not yet functioning as they might, as, owing to lack of mental hospital accommodation, certifiable mental patients have to be retained unduly in them. It is hoped at an early date to increase the facilities for the outdoor treatment of mental disorders.

In connection with the scheme for the treatment of venereal disease there has been a slight increase in first attendances for the treatment of primary syphilis. For the first time there has been a decided fall in the number of new cases of gonorrhœa and fewer attendances. In connection with incidence, two main points may be noted. As regards congenital syphilis, only 36 cases among children under a year were reported. This compares with 60 last year and with 138 in 1929. The total new cases of congenital syphilis were 177 in all compared with 218 last year. The second point of importance is that a new drug recently introduced for the treatment of gonorrhœa has been giving surprisingly good clinical results.

A full account of the activities of the service for mothers and children is given in the section devoted to Maternity and Child Welfare. In addition to the new principal centre at Provan which was opened in 1935, a large and comprehensive clinic at Florence Street was formally opened on 16th June, 1937. In this clinic the maternity and child welfare department has its ante-natal suite, its child welfare suite including weighing and consulting rooms, its demonstration room, its large hall with kitchen for social and education activities. The section for school children has its various treatment rooms, its facilities for orthopædic treatment, its spray baths and ultra-violet ray equipment. The dental suite, with its workroom for the making of dentures, is common to all who use the centre. The dental service, though primarily for scholars, is available for younger children and also for those requiring ante-natal dental treatment.

It will be observed that the services for mothers, young children and school children function as one, following the general principle that they should work together harmoniously pooling their common activities and using the resources of the health organisation of which they are a component part. This is an important consummation of the Local Government Act. Although the school medical service becomes part of, or rather a unit in, general administration, this co-operation does not and should not in any way lessen the importance of the fact that the education health service is essentially a school service. Preventive medicine is not an extra service in the school; it is an organic part of school life. The crucial test of a school service is the intimacy of the contact it makes with the educational system of its area and the manner in which it co-operates with those who operate the schools and with headmasters and teachers. Indeed, education authorities are now

in full career as health authorities, and the teaching profession has been the first to advocate and welcome the new health policy which may be expressed in the phrase "health in education and education for health."

In presenting this Report, I desire specially to acknowledge the services of Mr. William M'Kean, Assistant Secretary to the Department, who has, as usual, given much time and care to its preparation and arrangement, and, on the statistical side, the services of Mr. Ritchie and the clerical staff.

A. S. M. MACGREGOR.

Medical Officer of Health.

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REPORT

OF THE

Medical Officer of Health

FOR THE YEAR

1937

PART I

SECTION I.

POPULATION.

The population of the City as at the middle of 1937 is estimated by the Registrar General at 1,119,863 persons. At the last census in 1931 the population was 1,088,461, representing an increase in the six years since then of 31,402 persons. It has been customary in past years to make a local estimate of the City population based on the number of inhabited houses multiplied by a factor representing the average number of persons per house. The precise figure which should be accepted as indicating this factor has now become so uncertain owing to the fall in the birth rate that any estimate based on it is in the nature of guesswork. There is also the added difficulty created by the housing situation as the number of families who have migrated to areas beyond the City is not known with any degree of accuracy. For these reasons it has been decided not to attempt a local estimate of population but to accept the figure reached by the Registrar General, in particular as Government grants to local authorities in respect of the development of social services are allocated throughout the country on his figures.

The last accurate figure available for the number of persons per house was 4.1154 as shown by the 1931 Census. For nearly half-a-century this census factor had remained uniformly steady round about 4.75, but as explained in the Report for 1935 it was found desirable to reduce the figure to 4 persons per house. It is apparent, however, that if this figure were now adopted the effect might be to inflate unduly the population of the City as compared with the estimate of the Registrar General. It may be explained that the Registrar General while taking as his basis the number of inhabited houses also takes into account a number of other factors before arriving at his conclusions.

Despite the fact that the death rate has been reduced by 30 per cent. in the past fifty years, the natural increase of the population, i.e., the excess of births over deaths, has been halved because the birth rate has been rapidly falling. In Glasgow the natural increase has been fairly steady at about 5,000 per annum, but it would appear that very little of this increase has been retained, no doubt owing to the growth of the population in surrounding districts following housing activity in these areas. Taking these various considerations into account it would appear that while the number of inhabited houses within the city boundary is increasing, the population of the city is practically stationary.

Under the Glasgow Boundaries Order Confirmation Act, 1937, the area of the city has been further extended. As the added areas will not formally be included in the city until May, 1938, reference to this extension of the boundaries will be made in the Report for the current year.

Ward Population.—The distribution of the population throughout the wards is shown in Table I. of the Appendix. The largest ward population is 52,917 in Ruchill, followed by 48,341 in Shettleston and Tollcross, 45,726 in Provan, and 42,871 in Gorbals, whilst Pollokshields has now a population of 42,205. All these wards, with the exception of Gorbals, have rapidly increased because of housing schemes in these areas.

Institutional Population.—The number of persons resident in institutions at 30th June, as ascertained by special census, was 30,421, compared with the corresponding figure for the previous year of 29,746. This increase of 675 is largely accounted for by the fact that in Maryhill (261) there are larger numbers resident in the

military barracks, in Fairfield (277) there are 262 more patients under treatment in the Southern General Hospital, and in Pollokshields (103) there is an additional nursing home with 39 inmates and a larger number resident in Hawkhead Mental Hospital.

Acreage.—The acreage of the city remains the same, namely, 30,046. No alteration has taken place since 1932 when the acreage was increased from 29,511 to the present figure.

Density.—The density of the population varies little from year to year, the number per acre being 37, a figure at which it has remained since 1932 when it was 36. The highest density still obtains in Woodside where there are 188 persons to the acre, followed by Gorbals with 170, Townhead with 153 and North Kelvin with 141. Four other wards have a density of more than 100—Park, Whitevale, Dalmarnock and Mile-end. Two wards, because of large unbuilt areas, have a density of only 9, namely, Springburn and Pollokshields.

Inhabited and Empty Houses.—In Table II. of the Appendix the number of inhabited and empty houses is given for each municipal ward, according to a return supplied by the City Assessor. The total number of houses occupied at Whitsunday, 1937, was 277,726, an increase of 2,288 on the number for the preceding year despite the fact that during the year Demolition Orders were passed for 739 houses while 483 Closing Orders were made. Park ward shows an increase of 207 houses following an increase of 200 in the preceding year and 87 in 1935, an increase of 494 houses in three years; its equivalent unoccupied houses have been reduced by only 249. The growth of the “service” flat which these figures represent is referred to elsewhere. It is estimated that roughly 1,000 houses have been added to the total of the city through the multiple occupancy of large houses.

The largest increase of inhabited houses took place in Pollokshields ward where there are 508 more, followed by an increase of 376 in Provan, 348 in Ruchill, 307 in Cowlairst and 255 in Kelvinside.

The number of unoccupied houses at Whitsunday, 1937, is again considerably reduced, namely, 1,348 compared with 1,979 for the previous year. The number of unoccupied houses of five and more apartments is now 675, a reduction of 400 on the figure for the preceding year. The greatest reduction occurs in Park ward where

there are now only 69 houses of this size unoccupied, compared with 146, while the respective figures for Kelvinside are 129 and 187 and for Pollokshields, 99 and 149. Many of these larger houses have probably been taken for the purpose of conversion into service flats; there are now 586 one-apartment houses in Park ward, compared with 514 for the preceding year, while the number of houses of two, three and four apartments remains practically the same. In Kelvinside the number of occupied one-apartment houses has increased from 848 to 960.

NUMBER OF UNOCCUPIED HOUSES CLASSIFIED ACCORDING
TO NUMBER OF APARTMENTS.

			Old City		Extended City.			
			1913	1921	1931	1934	1936	1937
One Apartment,	...	...	4,169	33	154	169	167	187
Two Apartments,	...	...	9,762	17	155	160	100	150
Three	„	...	2,731	9	263	800	166	143
Four	„	...	954	8	443	1,775	471	193
Five	„	and up	1,094	76	902	1,523	1,075	675
			18,710	143	1,917	4,427	1,979	1,348

Dean of Guild Linings.—The number of linings granted by the Dean of Guild Court for each of the post-war years is given in Table III. in the Appendix. The total linings issued this year is 1,871 compared with 3,084 for the preceding year; the lowest number since 1925. Linings granted for three apartment houses numbered 687 against 1,462 for the preceding year and the corresponding figures for four apartment houses are 837 and 1,420; there were a few more linings for five and six apartment houses.

METEOROLOGY.

Weather conditions during the year were generally favourable, a low rainfall associated with anti-cyclonic conditions during the Spring and in November and December when easterly winds prevailed. The average temperature during March was 36.6°F. or 6° lower than that during March of last year, while December with an average of 34.7°F. was 5° lower than the average in the corresponding month of 1936. The lowest temperature recorded, 15°F. in December, occurred during one of the coldest spells for many years. The highest temperature, 80°F., occurred in August. The average temperature over the whole year, 47.0°F., was, however, only 0.3° below the average of the preceding decennium.

The total rainfall amounted to 31.66 inches, or 9.19 inches fewer than in 1936 and 10.73 below the average of the previous ten years. Since 1919 the only year that had a lower rainfall was 1933 with 29.17 inches. The low rainfall was due to the unusual dryness of November with less than half an inch, while the rainfall in December, 1.99 inches, was well below the average for that month. February was the wettest month with 4.40 inches and 25 days on which rain fell. The total number of days throughout the year with rain was 212, compared with 230 during the preceding year and 203 in 1933. There were frequent falls of snow in the first and last months of the year throughout the country generally but in the city the amount was not great.

The total hours of sunshine numbered 1,183 or 107 hours more than was recorded during the previous year. This amount is also 37 hours more than the annual average of 1,146 over the last ten years and only 72 hours below the record of 1933. April was less sunny and September more so than in 1936 while June had the largest total of 203 against 178 for the corresponding month of last year. The hours of sunshine recorded in November (55) and in December (32) were above the normal for that period of the year. Gales were frequent during these months and also early in the year.

CENTRAL HEALTH LECTURES.

A course of Central Health Lectures on health subjects of interest to the general public and especially to those engaged in welfare and social work was held in the M'Lellan Galleries during the winter of 1937-38, when the total attendances numbered 2,100. The following is the syllabus of the course:—

1937.	Subject.	Lecturer.
Oct. 19—	"Physical Fitness and the Nation," ...	The Marquess of Douglas and Clydesdale.
Dec. 7—	"Our Teeth : How they come and why they go,"	Dr. Alex. Buchan, L.D.S.
1938.		
Feb. 22—	"Venereal Diseases and Physical Fitness,"	Dr. T. Drummond Shiels.
Mar. 15—	"The Inequality of Man,"	Professor F. A. E. Crew.

At the lecture given by the Marquess of Douglas and Clydesdale a demonstration of physical fitness exercises was given by members of the Women's League of Health and Beauty.

DISTRICT HEALTH LECTURES.

These, as usual, were given by medical members of the Public Health staff who also gave talks and lectures to Trade Union Societies, social organisations, guilds, etc., during the year, to the number of 89.

The District Health Lectures were as follows:—

District	1936.	Subject.	Lecturer.
North-East	Feb. 3—	" Food, Nutrition and Health "	Dr. John Walker.
North-West	Feb. 9—	" Health and Port Work," ...	Dr. R. J. Peters.
East	Feb. 23—	" Food and Physical Fitness,"	Dr. John Walker.
South-East	Mar. 22—	" Health in Childhood : Strength in Manhood,"	Dr. Doris McWalter.

The attendances at these lectures totalled approximately 625.

All the lectures were illustrated by educational films, usually on health subjects.

BLIND PERSONS ACT, 1920.

MEDICAL CERTIFICATION OF BLIND PERSONS IN
SOUTH-WEST SCOTLAND.

The new workshop for the blind at Possilpark opened on 15th October, 1937, centralises in one building all the trades previously carried out by the blind partly at Castle Street and partly at Saracen Street. The new building, which is six storeys in height, has been constructed on modern lines in skeleton steel with floors of reinforced concrete. The Glasgow workshops are now the largest and most up to date in Great Britain. There are at present 417 journeymen and women employed, together with 75 trainees. The former premises in Castle Street have been taken over by the Glasgow Royal Infirmary for extension of the infirmary buildings.

Work of the Regional Clinic.—During the year 869 persons were examined for the first time, of whom 734 were examined at the clinic and 135 at home. In addition, 147 applicants were re-examined, making for the year a total of 1,016 cases examined. There was a decrease in the number of candidates examined as compared with the previous year, the comparative figures for 1936 being 930 first examinations and 175 re-examinations, making a total of 1,105 cases examined. Of the 869 candidates examined, 538 or 61.9 per cent. were certified blind within the meaning of the

Act. The work of the clinic since its inauguration in 1929 is summarised in the following statement:—

Year.	Number Examined.	Percentage Certified Blind.	Number Re-examined.
1929 (4 months),	339	50·0	—
1930,	1,166	62·4	75
1931,	912	61·7	147
1932,	711	56·3	145
1933,	652	58·7	176
1934,	673	62·6	115
1935,	687	68·6	109
1936,	930	69·7	175
1937,	869	61·9	147
	6,939	62·3	1,089

Source of Candidates.—The source of candidates is shown as follows:—

Applicants for Blind Pension,	238
Applicants for increased Public Assistance,	302
Applicants for Technical Training,	60
Applicants for Free Tramway Pass,	19
Applicants referred by Mission to Outdoor Blind ...	243
Wireless Licence,	4
Unclassified,	3

The largest number was examined in connection with applications for increased Public Assistance, but a substantial proportion attended in connection with applications for blind pensions.

TABLE I.

SHOWING THE AGE AND SEX INCIDENCE OF APPLICANTS CLAIMING TO BE BLIND EXAMINED AT THE CERTIFYING CLINIC DURING THE YEAR 1937.

Age.	Certified			Rejected.		
	Males.	Females.	Total.	Males.	Females.	Total.
—1,	—	2	2	—	—	—
1-4,	3	4	7	—	1	1
5-15,	1	2	3	5	6	11
16-29,	23	14	37	32	17	49
30-39,	25	16	41	14	11	25
40-49,	25	28	53	20	17	37
50-59,	49	37	86	29	29	58
60-69,	61	59	120	52	36	88
70+,	87	102	189	39	23	62
	274	264	538	191	140	331

From the above table it will be seen that 603 of the applicants, or 69.4 per cent., were over 50 years of age, as compared with 74.0 per cent. in the previous year and 66.7 per cent. in 1935. As in previous years, male applicants outnumbered female.

It may be observed also that of the 538 persons certified blind, 1.7 per cent. were below school age (1-5 years), 0.6 per cent. were of school age (5-15 years), 24.3 per cent. were between 16 and 49 years, and 73.4 per cent. were over 50 years of age.

TABLE II.

SHOWING THE ALLOCATION OF THE APPLICANTS EXAMINED DURING 1937 AT THE CERTIFYING CLINIC AMONG THE LOCAL AUTHORITIES COMPOSING THE JOINT-COMMITTEE FOR THE BLIND FOR GLASGOW AND THE SOUTH-WEST OF SCOTLAND.

	Certified.			Rejected.		
	Males.	Females.	Total.	Males.	Females.	Total.
Glasgow,	146	126	272	110	71	181
Airdrie,	6	3	9	2	3	5
Coatbridge,	6	7	13	5	6	11
Hamilton,	5	11	16	6	5	11
Motherwell and Wishaw, ...	8	10	18	1	1	2
Rutherglen,	5	4	9	3	5	8
Other Lanarkshire,	28	29	57	26	22	48
Greenock,	10	9	19	6	4	10
Paisley,	4	7	11	1	—	1
Port-Glasgow,	2	6	8	3	2	5
Other Renfrewshire,	2	2	4	2	—	2
Dumbarton,	3	2	5	4	—	4
Clydebank,	2	3	5	1	3	4
Other Dunbartonshire, ...	3	4	7	1	3	4
Falkirk,	4	3	7	—	1	1
Stirling,	—	—	—	1	—	1
Other Stirlingshire,	4	1	5	3	1	4
Ayr,	5	4	9	2	1	3
Kilmarnock,	3	2	5	—	4	4
Other Ayrshire,	19	23	42	11	2	13
Argyll County,	5	2	7	2	3	5
Bute County,	—	—	—	—	—	—
Dumfries Burgh,	4	6	10	1	3	4
Not stated,	—	—	—	—	—	—
Total,	274	264	538	191	140	331

Of the applicants examined, 453, or 52.1 per cent., resided in Glasgow, compared with the corresponding percentage of 56.1 during the preceding year.

Causes of Blindness.—The causes of blindness of the 538 accepted cases during the year are shown below. The largest number is included in the category "Congenital" and "Undetermined." As in previous years, the most important individual causes of blindness are myopia, cataract, glaucoma, venereal diseases, and septicæmia.

CAUSES OF BLINDNESS.

Congenital and Undertermined—

Congenital anomalies (21) and developmental defects (14), ...	35
Myopia, ...	82
Glaucoma, primary, ...	44
Cataract, primary, ...	137
Other primary ocular defects (primary detachment), ...	11

Infectious and Toxic—

(a) Exogenous :

Ophthalmia neonatorum, ...	9
Trachoma ...	2
Local septic infection of coats of eye, ...	6

(b) Endogenous :

Gonorrhœa, ...	1
Syphilis, congenital, ...	20
Syphilis, acquired, including not definitely congenital, ...	9
Specific fevers (smallpox, measles), ...	2
Meningitis (non-tuberculous), including cerebro-spinal fever, ...	3
Tuberculosis, ...	2
Phlyctenular, strumous and similar, not definitely tuberculous, ...	20
Septicæmia, Acute, ...	1
Septicæmia, chronic ; autotoxic, focal sepsis, ...	64
Other general infections and organismal diseases, ...	5

Traumatic and Chemical—

Birth trauma, ...	1
Non-industrial trauma, ...	6
Industrial trauma, ...	10
Chemico-toxic, non-industrial (tobacco), ...	1
Scheduled industrial diseases (lead) (pyroxylin) (carbon bi-sulphide) (aniline) (phosphorus) (glass-blowers' cataract) (metal workers' cataract) (miners' nystagmus), ...	—
Sympathetic ophthalmia, ...	8

Systemic Diseases—

Diabetes, ...	14
Nephritis, ...	1
Vascular diseases, including cerebral vascular lesions, ...	22
Intracranial neoplasm, ...	6
Other diseases of central nervous system, ...	13

<i>Not Ascertainable Definitely,</i> ...	3
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Total, ...	<u>538</u>
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In 1937, 147 cases were re-examined, compared with 175 in 1936. The alteration in the decision of the clinic as the result of re-examination was as follows:—

(a) Certified blind on first examination and decision unaltered on re-examination,	15
(b) Certified blind on first examination and decision reversed on re-examination,	10
(c) Certified not blind on first examination and decision unaltered on re-examination,	58
(d) Certified not blind on first examination and decision reversed on re-examination,	31
(e) Certified blind on second examination and decision unaltered on re-examination,	3
(f) Certified blind on second examination and decision reversed on re-examination,	—
(g) Certified not blind on second examination and decision unaltered on re-examination,	12
(h) Certified not blind on second examination and decision reversed on re-examination,	9
(i) Others,	9
Total,	<u>147</u>

During the year 10 cases previously certified blind were de-certified.

Serological Tests for Syphilis.—Specimens of blood were submitted to the Kahn test in 471 of the cases examined at the clinic, and 42, or 8.9 per cent., were reported positive. The percentage of specimens giving positive results was 9.1 in 1931, 9.2 in 1932, 11.8 in 1933, 9.6 in 1934, 6.8 in 1935, and 8.7 in 1936. It should be mentioned that all specimens of serum showing a positive Kahn test are also submitted to the Wassermann reaction for confirmation.

Follow-Up of Patients.—During the past few years an attempt has been made to follow up patients examined at the Regional Blind Clinic whose vision was considered by the examining surgeons as likely to benefit from further treatment. This scheme of after-care has been made possible by the co-operation of the Mission to the Outdoor Blind for Glasgow and the South-West of Scotland. The home teachers make special enquiries twice yearly regarding such patients and report progress. Where operative or other treatment has been completed, the patient is summoned to the clinic for examination and the improvement or otherwise noted, while the teacher endeavours to persuade defaulters to attend for advice. Enquiry over a more extended period will be necessary before the

value of the scheme can be properly assessed, but the results as regards 293 cases certified blind and now fully disposed of are shown as follows:—

TREATMENT CARRIED OUT.

Treatment Recommended.	No. of Cases.	Total.	Still Blind.	Not Now Blind.	Dead.	Unwilling.	Unfit.	Others.
Surgical, ...	279	36	18	18	48	73	75	47
Medical, ...	14	5	5	—	2	3	—	4
Total,	293	41	23	18	50	76	75	51
		14.0%			17.1%	25.9%	25.6%	17.4%

While the treatment recommended at the clinic was carried out in only 41 persons, or 14.0 per cent. of the total, it will be observed that in a considerable proportion of those who received surgical attention the vision was sufficiently improved to allow of their removal from the category of blindness. Many of the patients on more detailed examination were found to be unfit for operative measures, while a large number, mainly for reasons of an economic nature, were unwilling to undergo treatment.

The value of the scheme of after-care, apart from other considerations, has been amply demonstrated by the substantial reduction in the number of re-examinations which would otherwise have been necessary.

LEGISLATION.

During the year the following Acts of Parliament, Regulations, etc., dealing directly with Public Health, or having a bearing thereon, came into operation:—

ACTS OF PARLIAMENT.

- (1) Glasgow Corporation Order Confirmation Act, 1937.
- (2) Glasgow Streets, Sewers and Buildings Consolidation Order Confirmation Act, 1937.
- (3) Physical Training and Recreation Act, 1937.
- (4) Air Raid Precautions Act, 1937.
- (5) Children and Young Persons (Scotland) Act, 1937.
- (6) Maternity Services (Scotland) Act, 1937.
- (7) Factories Act, 1937.
- (8) Hydrogen Cyanide (Fumigation) Act, 1937.

- (9) Agriculture Act, 1937.
- (10) Diseases of Fish Act, 1937.
- (11) Milk (Amendment) Act, 1937.

CIRCULARS, ORDERS, REGULATIONS, &C., ISSUED DURING 1937.

Air Raid Precautions—

- (1) Home Office, Circular No. 701,092/14, of 31-5-37—Co-operation between Local Authorities and the Occupiers of Industrial or Business Premises.
- (2) Scottish Office, Circular No. 3214 of 3-3-37.
- (3) Do., Circular No. 3279 of 14-7-37 (A.R.P./144)—Anti-Gas Training.
- (4) Home Office, Circular No. 701,562/22 of 8-7-37 — Anti-Gas Training. Injury or disability incurred by a student.
- (5) Scottish Office, Circular No. 3320 of 30-12-37—Air Raid Precautions. First-Aid Posts.
- (6) Home Office (Fire Brigades Division), Circular No. 751,865/1 of 23-2-37—Fire Brigade Services.
- (7) Do., do., Memo., 23-2-37 — Emergency Fire Brigade Organisation.
- (8) Do., do., Circular No. 751,866/7 of 15-12-37—Emergency Fire Brigade Organisation.
- (9) Do., do., —Sketch of Emergency Fire Brigade Organisation for Hypothetical Town.

Education—

- (1) Scottish Education Department, Circular No. 104 of 17-3-37—School Population in Scotland.
- (2) Do., Circular No. 105 of 1-9-37—Education and Care of Mentally and Physically Defective Children.
- (3) Scottish Office, Memorandum on the Powers of Local Authorities and Education Authorities in Scotland under the Physical Training and Recreation Act, 1937.

Blindness—

- (1) Ministry of Health, Circular No. 1605 of 30-3-37—Local Government Act, 1929—Welfare of Blind Persons.
- (2) Ministry of Health, Circular No. 1621 of 6-8-37—Prevention of Blindness.

Maternity and Child Welfare—

- (1) Department of Health for Scotland, Circular No. 46 of 10-6-37 —Maternity Services (Scotland) Act, 1937.
- (2) Do., Memo., Nos. 46^a and 46^b of 10-6-37—Maternity Services (Scotland) Act, 1937.
- (3) Do., Circular No. 47 of 9-7-37 — Refresher Courses for Health Visitors.
- (4) Department of Health for Scotland and Scottish Education Department, Joint Memo. Foods No. 47—Nutrition.
- (5) Department of Health for Scotland, Circular No. 48 of 3-8-37 —Maternity Services (Scotland) Act, 1937.
- (6) Do., Circular No. 938/S51 of 19-10-37—Midwife, Scotland. Supervision of Midwives. The Midwives (Qualifications of Supervisors) Regulations.
- (7) Do., Circular No. 50 of 29-10-37 — Maternity Services (Scotland) Act, 1937. Supervision of Midwives.
- (8) Do., Order No. 1135/S.68 of 11-12-37 — The Maternity Nurses (Certifying Hospitals and Institutions) Order (Scotland), 1937.
- (9) Do., Circular No. 54 of 22-12-37 — Maternity Services (Scotland) Act, 1937. Maternity Nurses.

Infectious Disease—

- (1) Ministry of Health, Circular No. 1596 of 1-2-37—Notification and Treatment of Ophthalmia Neonatorum.

Tuberculosis—

- (1) Ministry of Health, List 10^f of December, 1937—Sanatoria and Residential Institutions for the Treatment of Persons suffering from T.B.

Venereal Disease—

- (1) Department of Health for Scotland, Circular, I.D. 50/1937 of 30-10-37—Prevention and Treatment of V.D.
- (2) Do., List A (Revised September, 1937)—Approved Arsenobenzene Compounds.

Disinfection—

- (1) Ministry of Health, Memorandum (Revised), September, 1937 —Fumigation of Ships with Hydrogen Cyanide.

Housing—

- (1) Department of Health for Scotland, Order No. 203/S.12 of 17-3-37 — Housing (Scotland) Act, 1935 (Operation of Overcrowding Provisions) Order, 1937.
- (2) Do., Order No. 457/S.24 of 15-5-37 — Housing (Rent Rebates) Regulations (Scotland), 1937.
- (3) Do., Circular No. 92 of 26-5-37—Housing (Scotland) Act, 1935. Housing (Rent Rebates) Regulations (Scotland), 1937.
- (4) Do., Order No. 1155/S.71 of 17-12-37—The Housing (Reports of Overcrowding) Regulations (Scotland).

Food—

- (1) Department of Health for Scotland, Circular Foods 254627/254893 of 11-2-37—Public Health (Imported Food) Regulations (Scotland), 1932 and 1933. Descriptions of labels issued by the Government of Brazil and the Shanghai International Settlement.
- (2) Do., Order No. 509/S.25 of 10-5-37—The Public Health (Imported Food) Regulations (Scotland), 1937.
- (3) Do., Circular No. 46/1937 of 8-6-37—The Public Health (Imported Food) Regulations (Scotland), 1937.
- (4) Do., Circular Foods 208,127/12 of 6-9-37—Imported Food. Meat Inspection. Caseous lymphadenitis. Instructions for Routine Inspection of Carcases.
- (5) Do., Circular Foods No. 48, 1937, of 28-9-37—The Public Health (Imported Food) Regulations (Scotland), 1937.
- (6) Do., Order No. 1176/S.74 of 23-12-37—The Diseases of Fish (Scotland) Regulations, 1937.

Milk—

- (1) Department of Health for Scotland, Order No. 212/S.13 of 18-3-37 — The Milk (Special Designations) Amendment Order (Scotland).

Drugs—

- (1) Order No. 560/1937 of 18-6-37—Dangerous Drugs Regulations, 1937.
- (2) Order No. 1029/1937 of 2-11-37—The Poisons List (Amendment) Order, 1937.

- (3) Order No. 1030/1937 of 2-11-37—The Poisons (Amendment) Rules, 1937.
- (4) Order No. 559 of 18-6-37—The Raw Opium, Etc., Regulations, 1937.

Therapeutic Substances—

- (1) Department of Health, Circular Hospitals No. 8 of 27-2-37—Surgical Catgut.
- (2) Department of Health for Scotland, Memorandum of February, 1937—Sterilisation of Surgical Catgut.
- (3) Do., Circular Hospitals No. 9 of 30-10-37—Therapeutic Substances Act, 1925.
- (4) Do., —Therapeutic Substances Act, 1925. Amending Regulations dealing with Surgical Catgut.

Industrial Hygiene—

- (1) Home Office, Factories Bill, 1937—Memorandum showing the extent to which the Bill differs from the existing Law, February, 1937.
- (2) Home Office, Order No. 271 of 6-4-37—Shops Regulations.

SECTION II.

VITAL STATISTICS.

The vital statistics are given in detail in respect of municipal wards, causes, sex, age, etc., in the Appendix Tables on page 295, *et seq.*, but a summary is here introduced of the principal numbers and rates for convenient comparison with those of the preceding years.

SUMMARY.

	1935.	1936.	1937.
Population	1,119,414	1,119,600	1,119,863
Acreage	30,046	30,046	30,046
Persons per acre	37	37	37
Number of Inhabited Houses	273,124	275,438	277,726
Deaths—Number registered	16,960	17,894	18,007
„ After correction for Transfers ...	15,537	16,406	16,379
Births—Number registered	22,991	23,236	23,268
„ After correction	22,102	22,273	22,176
Death rate per 1,000 living—			
All causes	13.88	14.65	14.63
Birth rate per 1,000 living	19.74	19.89	19.80
Deaths under One Year—After correction	2,169	2,429	2,313
„ „ „ Per 1,000 births	98	109	104

BIRTHS.

The number of births registered, corrected for outward transfers and including those transferred inwards, was 22,176 in 1937, compared with 22,273 in 1936 and 22,102 in 1935. The birth-rate is therefore 19.80 which is slightly lower than the rate for last year, 19.89, and a little above that of 1935 when it was 19.74. Despite the better industrial conditions and a relatively high marriage-rate during the past two or three years, the birth-rate has remained uniformly low. It is possible that the improved economic position of many families has had the effect of arresting the continuous downward trend of the birth-rate which has been its characteristic during the past half century. The Glasgow rate is still higher than the rates in most of the other large towns, being more than 2 per thousand of the population above the rate for the whole of Scotland. These and other matters are at present the subject of a special enquiry by a Government Committee.

Some of the wards with an excess of deaths over births are as follows:—

WARD.				Death Rate per Million.	Birth Rate per Million.	Excess of Death Rate over Birth Rate.
Park	...	...	...	17,930	12,456	5,474
Kelvinside	...	...	...	12,087	7,535	4,552
Langside	...	...	...	12,104	10,954	1,150
Camphill	...	...	...	13,121	11,879	1,242

The numbers of births in Shettleston and Tollcross, Hutchesontown and Govan are considerably in excess of the deaths.

The following information from the Registrar-General's returns shows the birth rates for Glasgow and Scotland since 1871:—

Glasgow.			Scotland.	Glasgow.			Scotland.
1871-1880	...	36.6	34.9	1931...	...	20.9	19.0
1881-1890	...	36.5	32.4	1932...	...	20.6	18.6
1891-1900	...	33.7	30.3	1933...	...	19.2	17.6
1901-1910	...	31.2	28.4	1934...	...	19.6	18.0
1911-1920	...	25.7	24.2	1935...	...	19.7	17.8
1921-1925	...	26.0	23.0	1936...	...	20.0	17.9
1926-1930	...	22.1	20.0	1937...	...	19.8	17.6

On the basis of local returns, the following comparison is made of the rates for several years in Glasgow and other towns:—

				1935.	1936.	1937.
Glasgow	...	...	...	19.7	19.9	19.8
Edinburgh	...	...	...	15.3	15.9	15.8
Dundee	...	...	...	17.9	17.7	17.4
Aberdeen	...	...	...	18.0	17.2	17.1
London	...	...	...	13.3	13.6	13.4
Liverpool	...	...	...	20.0	20.07	19.3
Manchester	...	...	...	14.5	14.7	14.3
Birmingham	...	...	...	15.4	15.8	16.1

ILLEGITIMATE BIRTHS.

The number of illegitimate births in 1937 was 1271, or 50 less than those for the preceding year, the percentage of the total births being 5.7, compared with the corresponding rate for 1936 of 5.9. The distribution of these births throughout the municipal wards and their respective percentages of the total births are given in Appendix Table V. While the greatest number was 99 in Gorbals ward, the highest proportion was 17.8 per cent. in Blythswood. The lowest percentage, 2.3, occurred in Yoker.

A more accurate comparison of the legitimate and illegitimate birth rates is obtained when the calculation is based on the number of females of child-bearing ages; the former on married women of 15 to 44 years of age, and the latter on the unmarried women and widows of the same ages. This is given in the following table:—

GLASGOW.—BIRTH RATES, DISTINGUISHING LEGITIMATE AND ILLEGITIMATE IN CERTAIN YEARS FROM 1871.

(Based on figures of Registrar-General.)

Year.	Number of Legitimate Births.	Rate per 1,000 Married Women 15-44 years.	Number of Illegitimate Births.	Rate per 1,000 Unmarried Women and Widows 15-44 years.
1871 ...	17,118	298	1,749	27
1881 ...	17,605	293	1,501	22
1891 ...	18,304	283	1,553	21
1901 ...	22,676	260	1,530	14
1911 ...	19,966	229	1,603	14
1921 ...	27,790	238	1,922	13
1931 ...	21,504	176	1,427	10
1935 ...	20,789	165	1,313	8
1936 ...	20,952	171	1,321	8
1937 ...	20,905	171	1,271	8

MARRIAGES.

There were 10,597 marriages in 1937 compared with 10,420 in 1936. These numbers represent rates of 9.5 and 9.2 of the population respectively. The marriage-rate has remained practically constant since 1871 except in the years of trade depression such as occurred in 1932-33 when it fell to 8.3. The following table shows the marriages per thousand of the population since 1871.

GLASGOW.—MARRIAGES PER 1,000 PERSONS LIVING.

1871-1880 ...	...	9.1	1931 ...	...	8.4
1881-1890 ...	...	9.3	1932 ...	...	8.3
1891-1900 ...	...	9.4	1933 ...	...	8.3
1901-1910 ...	...	8.8	1934 ...	...	9.2
1911-1920 ...	...	9.7	1935 ...	...	9.6
1921-1925 ...	...	9.3	1936 ...	...	9.2
1926-1930 ...	...	8.5	1937 ...	...	9.5

DEATHS.

The total number of deaths registered during the year was 18,007 which becomes 16,379 after adjustment for outward and inward transfers. This corrected figure is lower by 27 than the corresponding number for the preceding year. The death-rate per thousand of the population is therefore 14.6 against 14.7 for 1936.

The tendency for the death-rate to become stabilised at between 14 and 15 per thousand of the population is again demonstrated. Increased mortality from diseases of old age would seem now to be counterbalancing any reductions which are resulting from better social conditions and preventive medicine at younger ages. It may be that one of the factors is the migration to districts outside the boundaries of a high proportion of people at younger ages; the effect of this could only be determined by a knowledge of the exact age constitution of such emigrants. The death-rate is influenced by the varied incidence of infectious diseases from year to year. For instance, last year influenza alone was responsible for an increase by more than 0.3 of the total death-rate and whooping-cough for almost half that figure.

Quarterly Death Rates.—The following table of quarterly death rates shows the variation in the seasonal rates during the past three years:—

	1935.	1936.	1937.
1st Quarter	16.5 { Whooping-cough and Influenza prevalent.	17.4 { Measles, Influenza and Pneumonia prevalent.	18.6 { Whooping-cough, Influenza and Pneumonia prevalent.
2nd „	13.1 { Scarlet Fever and Whooping-cough prevalent.	14.3 { Measles and Diarrhoeal Diseases under 2 years of age prevalent.	13.0 { Whooping-cough prevalent.
3rd „	10.4	11.7	11.5 { Diarrhoeal Diseases prevalent.
4th „	14.9 { Scarlet Fever and Pneumonia prevalent.	14.8 { Whooping-cough and Diarrhoeal Diseases under 2 years of age prevalent.	15.3 { Measles and Respiratory Diseases prevalent.

Ward Death Rates.—The municipal ward death rates are given in Table VI. in the Appendix with the corresponding rates for the two preceding years. With the reduction of the death rate to a

comparatively low level since the war, there is not now the same marked disparity between the good residential and the poorer working-class districts. The highest rate, 20.9, was recorded in Blythswood, which is followed by 20.1 in Exchange, 18.1 in Calton, and 17.9 in Park. The lowest rates were 9.9 in Yoker and Knightswood, 11.5 in Cathcart, 11.8 in Maryhill, followed by 11.8 in Pollokshields.

According to the Registrar-General's returns, the rates for Glasgow since 1881 have been as follows:—

GLASGOW.—ALL CAUSES.—DEATH RATE PER 1,000 LIVING.

1881-1890	24.22	1931... ..	14.13
1891-1900	21.53	1932... ..	14.55
1901-1910	19.56	1933... ..	13.3
1911-1920	16.36	1934... ..	13.7
1921-1925	15.49	1935... ..	13.9
1926-1930	15.04	1936... ..	14.5
		1937... ..	14.6

The following is a comparison of death rates based on local returns of several large towns in Scotland and England:—

GLASGOW AND SEVERAL TOWNS.—DEATH RATE PER 1,000 LIVING.

	1935.	1936.	1937.
Glasgow	13.8	14.5	14.6
Edinburgh	13.3	13.4	14.0
Dundee	13.2	14.2	14.9
Aberdeen	13.5	12.7	13.0
London	11.4	12.4	12.5
Liverpool	13.2	12.9	13.2
Manchester	12.9	13.5	13.5
Birmingham	10.9	11.3	11.7

Transfer Deaths.—The deaths on which the above rates for Glasgow are calculated include those of persons formerly resident in Glasgow, but dying in institutions or elsewhere outwith the City. On the other hand, those dying within, but with home addresses outside, are excluded. The “inward transfers” numbered 491 during 1937, compared with 569 and 520 for the two preceding years, while the “outward transfers” numbered 2,119, compared with 2,057 and 1,943. The causes of deaths in both these groups are given in Appendix Table No. VII.

CAUSES OF DEATH.

The principal causes of death are summarised in the following table:—

SUMMARY OF DEATH RATES PER MILLION FROM PRINCIPAL CAUSES.

	1935.	1936.	1937.
General Diseases—			
(a) Infectious	723	944	816
(b) Tuberculous—			
(1) Phthisis	868	874	853
(2) Others	216	263	211
(c) Malignant (cancer, &c.)	1,397	1,440	1,393
Diseases of the nervous system	1,328	1,382	1,173
Diseases of the circulatory system	3,121	3,459	3,745
Diseases of respiration	1,988	2,051	1,973
Congenital defects and malformations (including premature birth)	833	823	840
Violence	482	557	535
All other causes	2,924	2,915	3,087
All causes	13,880	14,708	14,626

CAUSES OF DEATH.

The detailed causes of death and the death-rates for the year compared with those of the two preceding years is given in Appendix Table VIII. As was mentioned in the Report for last year the classification of the deaths is now made according to the rules for the “International Classification of Deaths” so as to maintain uniformity with other large towns in England and with other countries. In this connection it may be of interest to show some of the principal differences that arise when differing methods of classification of deaths are adopted; the following table illustrates this point in the application of rules adopted by the Registrar-General for Scotland.

Cause of Death.	International Classification.	Scottish R.-G. Classification.	Notes.
Cerebral Haemorrhage	925	1,205	In the International Classification Arterio-Sclerosis and Heart Disease are preferred to Cerebral Haemorrhage.
Heart Disease	3,307	3,088	
Other Circulatory— Diseases including Aneurism and Arterio Sclerosis	888	249	
Bronchitis	486	1,015	
			Pneumonia is preferred under the International Classification.

The death-rate from the infectious group of diseases has been more or less uniform during the past three years. This uniformity is wholly due to the fact that the death-rates from measles and whooping-cough, the two principal causes of mortality in this group, have been heavy in alternate years. In some years, however, the

prevalence of both coincide when the fluctuations from one year to another become somewhat violent. In 1937 whooping-cough was prevalent and the deaths numbered 285, giving a death-rate of 255 per million of the population, compared with 105 in 1936. Measles was not prevalent and only 29 deaths were recorded which represents a mortality of 26 per million against 278 for the preceding year. In 1935 the rate was only 7 per million.

With regard to the enteric group of diseases, the death-rate for enteric and paratyphoid fevers was only 4, compared with 12 and 13 respectively for 1936 and 1935 when the rates were relatively high; mortality in recent years from these diseases in Glasgow has been low compared with pre-war years. Diphtheria, on the other hand, was more fatal, 116 deaths being registered, representing a death-rate of 104, compared with 48 for 1936. This latter rate, however, was exceptionally low—the lowest on record—despite the fact that cases registered were fewer by only about twelve per cent. The mortality from scarlet fever was again slightly lower, the rate being 26 compared with 29 in 1936 and 33 in 1935. This low mortality was not accompanied by a low incidence, more cases being recorded in 1937 than in the preceding year.

Influenza was much more prevalent and the number of deaths, 496, is the largest recorded in any year since 1929, when 878 deaths were registered. The death-rate per million is 443, compared with 129 for 1936. The outbreak of influenza in the Spring of the year is dealt with in Section V. of this Report (Respiratory Diseases, Etc.)

Deaths from tuberculosis of the respiratory system were fewer by 24 in 1936, while the rate per million of the population, 853, is the lowest since 1934 when it was 783. The downward trend of the mortality over a long series of years has been arrested during the past two or three years. The death-rate from non-pulmonary forms of the disease, 211 per million of the population, is also less than the rate for last year which was 263, when the incidence of tubercular meningitis rose considerably. The rate for 1937 was more uniform with those of years previous to 1936 and is the lowest on record. The deaths from tubercular meningitis numbered 121 against 163 in 1936 and, as was stated last year, this cause, and other forms of meningitis not tubercular, were both heavier than had been the case during recent years. The heaviest ward mortality was 463 in Mile-end, followed by 240 in Govan.

Mortality from abdominal tuberculosis would appear to have reached a minimum for the present, the death-rate per million remaining practically stationary, *i.e.*, 31 in 1937 compared with 32 for the previous year. There is evidence that the bovine forms of tuberculosis, of which this is one, are much less prevalent than they used to be, owing to the increasing practice of pasteurisation of the general milk supply.

Malignant disease was again responsible for about one-tenth of the total mortality, the death-rate being 1,393 per million of the population and a special analysis is given on pages 44 and 45. All forms of cancer were the cause of 1,560 deaths, compared with 1,612 during the preceding year.

Deaths from diseases of the nervous system were again fewer, the rate being 1,173 per million against 1,382. Cerebral hæmorrhage was responsible for 826 and 977 respectively of these totals, while meningitis (not tubercular) was responsible for a rate of 27, compared with 54 for the preceding year. It may be that some of these deaths which would otherwise have been certified as due to meningitis were included among deaths from influenza which was very prevalent in the Spring of the year.

Deaths from diseases of the circulatory system were again considerably more numerous and the death-rate for this group is 3,745, compared with 3,459 for the preceding year. In 1934 the death-rate was only 2,857. The most important cause in this group is heart disease with a rate per million of 2,953, compared with 2,851 in 1936 and 2,535 in 1935. Arterio-sclerosis was also the cause of more deaths with a rate of 606 against 456 for the preceding year and 431 in 1935. A considerable part of this increase of 150 is probably associated with the reduction in the rate for deaths from cerebral hæmorrhage (151). It is probable that this sudden change-over is due to an altering practice in the filling up of death certificates, the primary cause, arterio sclerosis, being more often inserted in the certificate. These two causes together represent almost 10 per cent. of the total deaths, one-sixth of the total occurring between 65 and 75 years of age and one-fifth at ages over 75 years.

Respiratory diseases are dealt with in Section V. of this Report. The death-rate, 1,973, is a little lower than the corresponding figure of 2,051 for the previous year. The death-rate from bronchitis was 434 and for all forms of pneumonia, 1,378, compared with the respective mortalities of 454 in 1,426 in 1936.

Age and Sex Distribution.—The age and sex distribution of deaths is given in Appendix Table IX. For all causes the proportion per thousand of male and female deaths is as follows:—

	Age							
	—5	—15	—25	—35	—45	—65	65+	Total
Males	101	13	18	25	32	152	185	526
Females	83	11	22	23	28	114	193	474

Of the five deaths from enteric fever two were males between 45 and 55 years of age and three females between 25 and 45. Of the 29 deaths from measles 18 were males and 11 females, all under 10 years of age. All the deaths from whooping-cough were also under 10 years of age, 124 being males and 161 females, making a total of 285. Nearly half the deaths for each sex were among infants in the first year of life.

Despite the fact that scarlet fever was considerably more prevalent, deaths were fewer, 29 against 33, the males numbering 15, of which 3 were between 25 and 35 years of age, and the females 14. Diphtheria was more prevalent by approximately 15 per cent. but the deaths, numbering 116, were more than double the number occurring in 1936. The number of deaths for each sex was the same, 58, but among the males 8 of the deaths were under 15 years of age, against only 2 for females.

Of the total deaths from encephalitis lethargica, 23, only 6 were females, against 17 males, all of which were over 25 years of age. Cerebro-spinal fever was also more fatal amongst males, with 41 deaths to 13 females, the deaths under one year being 11 and 9 respectively.

Deaths from pulmonary tuberculosis among males numbered 540, compared with 542 during the previous year. The corresponding figures for females were 415 and 437. For the purpose of comparison the deaths are here divided into four groups for age and sex, as follows:—

	1937.		1936.		1935.	
	Male.	Female.	Male.	Female.	Male.	Female.
—15 Years ...	22	21	26	31	24	42
—25 Years ...	101	160	95	167	95	165
—45 Years ...	231	178	225	164	199	167
45+ Years ...	186	56	196	75	204	76
	540	415	542	437	522	450

There is again a preponderance of deaths among young females between the ages of 15 and 25, the excess being nearly 60 per cent., but the mortality among females under 15 years of age is

again considerably lower and indeed is only half the number occurring in 1935. Male deaths, as usual, outnumber the females, especially at ages over 45 years.

The heavy mortality from tubercular meningitis which occurred in 1936 has given way to the normal number in 1937 and the table on age distribution is here repeated to show the excess which occurs under 5 years of age. The numbers at each age group are little more than half of those of 1936 except for children of school age.

			AGE.					Total.
			-5	-10	-15	-20	20+	
1937	...	...	27	10	11	6	6	60
1936	...	...	52	15	11	12	10	100
1935	...	...	26	13	11	6	10	66

Of the 13 male deaths from syphilis 2 were under 1 year of age and there was the same number of female deaths out of a total of 8 at all ages. Of 24 deaths among males from general paralysis of the insane, 12 occurred in the age period 45-55 years while 4 of the female deaths of a total of 10 were between 35 and 45 years. The excess for both sexes occurred about 20 years after the general age of marriage.

Deaths from rheumatic fever were more numerous among females, 56 against 34 males, as was also the case with regard to diabetes, the excess being greater than usual, 135 females to 47 males. This excess is apparently due to the greater proportion of females living at older ages, there being only 5 male deaths over 55 years of age compared with 20 females, and at ages 65-75 the corresponding figures are 18 and 50.

The same observation applies to cerebral hæmorrhage where the ratio of male to female deaths was 393 to 530, the corresponding figures at ages over 75 years being 95 and 171. Heart disease, on the other hand, is more fatal among men, the deaths numbering 1,709 compared with 1,598 among women, despite the fact that female deaths over 75 were in excess by approximately 20 per cent.

With regard to respiratory diseases it is of interest to record that of 963 deaths from pneumonia 263 were under 1 year of age and 75 between 1 and 2 years. Of 640 female deaths the corresponding figures were 216 and 75. The mortality among males at the several age periods over 35 is double that of the females.

Peptic ulcer was four times as fatal among males as among females, the deaths numbering 87 and 22 respectively and 27 of the male deaths occurring under 45 years whereas there was none among

females under that age. Male infants are more subject to fatal diarrhoea in the proportion of 224 to 148 females (under two years of age). Women are more subject to diseases of the liver for there were 22 female deaths from cirrhosis and 61 from other diseases of the liver compared with the corresponding figures for males of 18 and 19 respectively.

CANCER.

A detailed tabulation of the cancer deaths is given on the following page showing the site of the lesions in relation to sex and age. Altogether there were 1,560 deaths from the disease, compared with 1,612 in the previous year. These totals represent about 10 per cent. of deaths from all causes. The male deaths numbered 767 and the female deaths 793 and, as usual, there is a considerable sex disparity according to the site of the lesion. Taking the annual number of deaths during the two previous quinquennia as an indication of the trend of the increase in the sexes, the following figures are of interest.

	Males.	Females.
1927-31	693	779
1932-36	752	794
1937	767	793

About three-fourths of the deaths occurred at ages over 55 years so that the gradual increase in the mortality is probably associated with the increasing proportion of the population surviving at older ages. The death-rate from cancer for the city was 1,393 compared with 1,440 for the preceding year. The deaths of males from cancer of the buccal cavity are fewer this year, 64 against 72 in 1936, but the disparity between the sexes is still in evidence for there were only 10 female deaths. Cancer of the digestive organs and peritoneum was the cause of death of 460 males and 441 females, 901 altogether, or nearly 60 per cent. of the total deaths from cancer. Males have a higher mortality from cancer of the œsophagus and rectum, females being more affected in the liver and other organs while both are equally prone to disease of the stomach.

Excess of male deaths from cancer of the respiratory organs is considerable, 103 to 38 female deaths. Cancer of the female reproductive organs, etc., accounted for 235 deaths, more than half, 125, being due to disease of the breast. Female deaths from this cause for the preceding year numbered 276.

Deaths of males from cancer of the genito-urinary organs numbered 79, compared with 67 during 1936.

GLASGOW, 1937.—DEATHS FROM CANCER IN THE DIFFERENT SITES AS GIVEN IN THE INTERNATIONAL LIST OF CAUSES OF DEATH, 1931.

45

SITE OF LESION.	Year 1936.																		BOTH SEXES.	All Ages. Males, Females, Sexes.		
	MALES.									FEMALES.												
	-15	-25	-35	-45	-55	-65	-75	75+	Total.	-15	-25	-35	-45	-55	-65	-75	75+	Total.		Males.	Females.	Sexes.
Buccal Cavity and Pharynx ...	—	1	1	1	7	16	31	7	64	1	—	—	—	1	3	4	1	10	74	72	11	83
Digestive Organs and Peritoneum—																						
(a) Oesophagus ...	—	—	—	1	2	16	10	3	32	—	—	—	—	2	10	4	—	16	48	38	20	58
(b) Stomach and Duodenum ...	—	—	4	5	24	50	67	13	163	—	—	1	8	22	51	60	24	166	329	197	162	359
(c) Rectum ...	—	2	2	5	7	15	23	9	63	—	—	2	5	2	7	7	5	28	91	59	38	97
(d) Liver and Biliary Passages	—	—	—	1	2	11	17	3	34	—	—	—	1	6	14	24	6	51	85	30	55	85
(e) Pancreas ...	—	—	—	1	7	8	6	7	29	—	—	—	4	5	12	4	1	26	55	22	15	37
(f) Peritoneum ...	1	—	—	—	1	—	—	—	2	—	—	—	—	1	1	—	—	2	4	1	6	7
(g) Other Digestive Organs ...	—	1	2	5	11	48	50	20	137	—	—	1	9	21	43	44	34	152	289	144	130	274
Respiratory Organs ...	—	—	3	6	28	39	24	5	105	1	—	1	2	5	13	11	5	38	143	97	27	124
Uterus ...	—	—	—	—	—	—	—	—	—	—	—	—	12	22	24	18	5	81	81	—	109	109
Other Female Genital Organs ...	—	—	—	—	—	—	—	—	—	—	—	1	3	5	12	7	1	29	29	—	32	32
Breast ...	—	—	—	—	—	—	—	—	—	—	—	1	12	33	29	31	19	125	125	—	135	135
Male Genito-Urinary Organs ...	1	—	1	5	12	18	29	13	79	—	—	—	—	—	—	—	—	—	79	67	—	67
Skin ...	—	—	—	—	2	—	3	2	7	—	—	—	—	—	2	4	5	11	18	13	8	21
Other or Unspecified Organs ...	—	2	1	6	8	17	10	8	52	2	1	1	4	11	13	17	9	58	110	58	66	124
Totals ...	2	6	14	36	111	238	270	90	767	4	1	8	60	136	234	235	115	793	1,560	798	814	1,612

GLASGOW.—DEATHS FROM "SUICIDE AND OTHER VIOLENCE."

Year.	MALES.					FEMALES.					Both Sexes.
	—5 years.	—15 years.	—45 years.	+45 years.	Total.	—5 years.	—15 years.	—45 years.	+45 years.	Total.	
1930 ...	45	66	165	237	513	33	22	49	105	209	722
1931 ...	37	59	133	205	434	28	24	47	120	219	653
1932 ...	41	63	109	181	394	41	20	43	109	213	607
1933 ...	62	46	149	174	431	34	21	52	94	201	632
1934 ...	33	44	122	189	388	26	26	39	109	200	588
1935 ...	42	42	98	143	325	25	12	25	91	153	478
1936 ...	37	40	125	201	403	40	17	29	135	221	624
1937 ...	46	38	125	200	409	22	24	41	103	190	599

Deaths in Hospitals, Nursing Homes and other Institutions.—

Details of the deaths in Glasgow institutions are given in Appendix Table X, which shows that more than half (53.2 per cent.) of the total deaths registered occurred in such institutions. The proportion for the previous year was 53.3 per cent. Of the total 8,718 deaths, 3,979 occurred in local authority general hospitals and poorhouses, 1,768 in fever hospitals and sanatoria, and 182 in mental hospitals; altogether more than two-thirds of the total deaths in institutions. In voluntary hospitals and infirmaries, 2,559 deaths occurred, and 230 in nursing homes. The largest number of deaths occurred from heart disease, 1,388 followed by pneumonia, 1,055; cancer, 770; and 592 from pulmonary tuberculosis.

SECTION III.

MATERNITY AND CHILD WELFARE.

INTRODUCTION.

Vital Statistics.—The infant mortality rate for 1937 was 104 per thousand births ; this rate is slightly lower than that of 109 for the preceding year and is just equal to the average rate for the past ten years. The causes which maintain this unsatisfactory figure fall into three main groups as shown in the Appendix, Tables XIII. and XIV.—immaturity, diseases of the lungs, diarrhoeal diseases.

Throughout the years practically no impression has been made on the difficult group of deaths from prematurity from which children succumb at birth or within a short period thereafter. Diseases of the lungs, bronchitis, and pneumonia, have always been common causes of death among infants. The incidence of these affections varies from year to year ; during 1937 the death rate from these causes was related to an epidemic of whooping-cough, especially in the first six months of the year, and to the presence of influenza in the early part of the year. An increase in the incidence of diarrhoeal infections in young children was observed during 1936 ; this was also a feature of 1937, though to a somewhat less extent. There has, in fact, been a considerably increased prevalence of dysenteric affections throughout the country during the past two years for which no definite reason can be assigned. As regards the distribution of infant mortality throughout the City, the same gradations are noticeable in the different areas, depending largely upon housing conditions.

Maternal Mortality and Morbidity.—The maternal mortality rate for the year was 4·9 per thousand births, which compares with 4·8 for Scotland as a whole and with 5·9 for the previous year. The fall in the mortality rate which these figures indicate is especially due to a reduction in the death rate from puerperal sepsis.

Special mention may again be made of the increase in abortions treated in hospital. The following table shows the admissions to hospital since 1932.

	1932.	1933.	1934.	1935.	1936.	1937.
Royal Maternity Hospital ...	529	652	508	355	395	497
Corporation General Hospitals	597	709	746	1,065	1,125	913
Robroyston Hospital ...	30	44	160	145	54	197
	<u>1,156</u>	<u>1,405</u>	<u>1,414</u>	<u>1,565</u>	<u>1,574</u>	<u>1,607</u>

In addition to these, septic abortions are also admitted to the puerperal fever wards at Belvidere and Robroyston. The actual number of abortions taking place in the City is, of course, unknown, but must be considerable and increasing. Investigations show that abortions occur much more frequently in married women than in single women, the proportion being 13 of the former to 1 of the latter. Procured or self-induced abortion was admitted in about 20 per cent. of these patients.

Development of the Clinic System.—Progress continues to be made in the expansion and unification of the clinic and health centre system of the Corporation. In addition to the new principal centre at Provan, which was opened in 1935, a large and comprehensive clinic was opened at Florence Street on 16th June, 1937, by Bailie Thomas O'Hare, Convener of the Committee on Health. A description of this clinic is given later.

The building may be regarded as a principal clinic or health centre as it provides a number of special services which need not be duplicated in all the welfare centres. Larger centres of this kind are now available at William Street, Anderston, at Provan, and at Florence Street. The plans for a fourth in Govan have been prepared and approved by the Corporation for the south-west of the City.

Other centres of a more local character have been approved; that at Sandy Road, Partick, will include maternity and child welfare, treatment of school children, and outdoor medical services; that at Seaward Street, Kinning Park, will cover the same three services; that at Denmark Street, Possilpark, will be for maternity and child welfare, and treatment of school children. A site for a centre at Pollokshaws has been acquired and plans are being prepared. At Avenuepark Street, Maryhill, the present clinic is being extended and will combine the same three services. A site has also been obtained for a combined district clinic in Callander Street to replace that at present conducted in a shop in Dobbie's Loan.

Teaching of Mothercraft.—Reference was made in last year's report to developments in the teaching of mothercraft. Part of this work is now being undertaken by a special health visitor whose time is entirely devoted to the teaching of mothers at the ante-natal and infant welfare clinics.

The scheme whereby at certain of the centres classes of senior girls from the elementary schools are conducted has been continued throughout the year. There is reason to believe that the instruction given in the care and management of the young infant has aroused considerable interest on the part of the scholars.

In last year's report reference was made to the development of social work at the welfare centres. The activities there described have been continued and extended. In these activities the Glasgow Infant Health Visitors' Association play a very prominent part, and their continued interest in these various activities is of great value in promoting the efficiency of the centres.

INFANT MORTALITY.

The following tables show (1) the infant death-rates in Glasgow since 1891; (2) the rates in other large towns; and (3) the death-rates among legitimate and illegitimate children per 1,000 births in each group:—

GLASGOW—INFANT DEATH-RATE DURING SEVERAL PERIODS.

				Per 1,000.		Per 1,000.	
Average of 10 years, 1891-1900	...	...	...	149	1930	...	101
„ 10 „ 1901-1910	...	...	...	135	1931	...	105
„ 5 „ 1911-1915	...	...	...	134	1932	...	112
„ 5 „ 1916-1920	...	...	...	115	1933	...	96
„ 5 „ 1921-1925	...	...	...	107	1934	...	98
1926	...	...	...	104	1935	...	98
1927	...	...	...	107	1936	...	109
1928	...	...	...	104	1937	...	104
1929	...	...	...	107			

COMPARISON WITH SEVERAL LARGE TOWNS.

				1934.	1935.	1936.	1937.
GLASGOW	...	...	...	98	98	109	104
Edinburgh	...	...	...	62	70	68	70
Dundee	...	...	...	74	68	81	87
Aberdeen	...	...	...	77	91	70	72
London	...	...	...	67	58	66	60
Liverpool	...	...	...	81	83	75	82
Manchester	...	...	...	69	71	77	76
Birmingham	...	...	...	68	64	62	61

Illegitimate Mortality.—The mortality of illegitimate children compared with others is shown in the following table, since the beginning of the present century. It will be observed that there has been a marked fall in the numbers since 1932, although the rate for 1937 is a little higher than those recently obtaining.

GLASGOW—DEATH-RATE PER 1,000 LEGITIMATE AND
ILLEGITIMATE BIRTHS.

	Legiti- mate.	Illegiti- mate.		Legiti- mate.	Illegiti- mate.
1899-1900 ...	144	286	1929 ...	103	165
1901-1910 ...	126	257	1930 ...	91	146
1911-1915 ...	127	217	1931 ...	99	173
1916-1920 ...	110	175	1932 ...	101	169
1921-1925 ...	103	169	1933 ...	95	127
1926 ...	101	157	1934 ...	97	112
1927 ...	105	147	1935 ...	96	112
1928 ...	102	176	1936 ...	101	129
			1937 ...	97	135

Causes of Infant Mortality.—The causes of infant mortality according to sex and for each month during the first year of life are given in Appendix Tables XIII and XIV. The proportion of deaths occurring in the first month was 39 per cent. for males and 43 per cent. for females, compared with 37 for both males and females for the preceding year. The mortality in the early weeks of life is largely due to congenital causes and diseases of early infancy which now form more than one-third of the total infant mortality rate. The mortality of male infants was 21 per cent. in excess of the rate for females.

		Rate per 1,000 Births.										
Causes of Death.		1911-15	1916-20	1921-25	1926-30	1931	1932	1933	1934	1935	1936	1937
MALES—												
I.	Immaturity ...	46	46	40	43	42	41	42	41	49	46	46
II.	Diseases of Respiratory System ...	30	27	30	32	26	38	27	33	25	29	28
III.	Diseases of Digestive System ...	23	18	15	15	17	21	18	14	17	24	20
IV.	Diseases of Nervous System ...	—	8	7	6	5	4	5	4	4	4	4
V.	Tuberculous Diseases ...	6	3	3	2	2	1	1	1	1	2	1
VI.	Infectious Diseases ...	18	11	15	14	21	9	8	13	9	9	7
VII.	Suffocation ...	1	—	—	—	—	—	1	—	—	—	—
VIII.	All other causes	12	10	9	7	7	8	8	6	6	7	8
All causes ...		146	123	119	119	120	122	110	112	111	121	114

Rate per 1,000 Births.

Causes of Death.	1911-15	1916-20	1921-25	1926-30	1931	1932	1933	1934	1935	1936	1937
FEMALES—											
I. Immaturity ...	36	36	32	33	36	30	32	30	35	36	38
II. Diseases of Respiratory System ...	24	21	22	24	15	34	18	25	23	25	24
III. Diseases of Digestive System ...	19	14	10	11	11	16	14	8	11	17	14
IV. Diseases of Nervous System ...	8	6	5	4	3	4	3	2	2	5	2
V. Tuberculous Diseases ...	4	3	2	2	1	1	1	1	1	1	1
VI. Infectious Diseases ...	18	11	14	12	17	8	8	13	8	7	9
VII. Suffocation ...	1	—	1	—	—	—	1	—	1	1	—
VIII. All other causes	9	9	7	6	5	7	5	4	4	5	6
All causes ...	119	100	93	92	88	100	82	83	85	97	94
Ratio—Males to 100											
Females ...	123	123	128	128	136	122	134	135	131	125	121

The above tables indicate the usual excess of deaths among male infants in the immaturity group of causes. The deaths of male infants from premature birth were considerably higher, 291 against 277 in 1936, while deaths among female infants were lower, 211 against 228. These deaths are included under immaturity, the male mortality from which was 46 per 1,000 births compared with 38 for females. During the past three years these causes of infant mortality are in excess of the rates for former years. This is disappointing in view of the large increase of ante-natal work which has taken place during post-war years.

In the early months of the year there was a high incidence of respiratory diseases of the influenzal type which, as is always the case, affected mortality in the first year of life.

There were 228 male and 150 female deaths of infants from diarrhoeal diseases, compared with 250 and 162 respectively during the preceding year. This reduction coincides with the lessened prevalence of the enteric group of diseases generally and although the rates, 20 per 1,000 for males and 14 for females, are less than in 1936, they are above most of the rates for previous years with the exception of 1932. The increased mortality from diarrhoeal diseases cannot be ascribed to excessive temperatures during the summer or autumn months for, although

mortality usually tends to be heavier during the early autumn, the deaths have been more uniformly distributed throughout the years 1936 and 1937.

The death-rate for male infants, 4 per 1,000 births, from diseases of the nervous system, remains the same as for the preceding year. The actual number of female deaths was 26 against 51 in 1936. Tuberculous disease causes relatively few deaths among infants, most of them being due to meningitis. The male deaths from tuberculous meningitis numbered 8 compared with 15 for the previous year, while the corresponding numbers for females are 5 and 6. Deaths from abdominal tuberculosis for all ages have been reduced very considerably since the beginning of the present century; among infants, death from this disease has now practically disappeared. There were only 3 male and 2 female infant deaths from this cause during the year.

Mortality from infectious diseases was lower for males, 7 per 1,000 births compared with 9, while the female rate was higher, 9 against 7. Most of the deaths were due to whooping-cough, there being a high prevalence of that disease during the first six months of the year causing 56 male deaths and 83 female deaths out of totals of 75 and 101 for all infectious diseases.

The next most fatal infectious disease was cerebro-spinal fever, which was the cause of death of 11 males and 9 females.

There were 1,293 deaths of male and 1,020 deaths of female infants, compared with 1,372 and 1,057 respectively for the previous year. The infant mortality rate was 114 for males and 94 for females, while the ratio of male deaths to 100 females was 121.

Infant Mortality in Wards—The lowest infant mortality rate was 25 in Langside Ward, followed by the contiguous ward of Cathcart with 39. The highest rate occurred in Exchange with 174. Other high rates were 169 in Blythswood, 151 in Cowcaddens, 141 in Mile-End, and 137 in Gorbals. Other fifteen wards had rates in excess of 100 as shown in Table XIII of the Appendix, which also contains a comparison with the rates for the two preceding years.

"Mother and Child" Booklet.—This booklet, which was published towards the end of 1932, continues to be distributed through child welfare centres at the price of 1d., and during the year 1937 copies to the number of 1,637 were sold, compared with 1,554 for the preceding year.

NOTIFICATION OF BIRTHS.

The number of notifications of births received during 1937 is shown in Appendix Table XV., compared with the corresponding figures for the two preceding years.

Nature of Attendance at Births.—The proportion of births medically attended fell from 48·6 per cent. in 1914 to 40·1 in 1925. Since then it has increased, and in 1937 the proportion was 53·1.

Still-Births.—The number of still-births known to occur in Glasgow usually averages about 4 per cent. of the total births. During 1937 there were 950 still-births, equal to a rate of 4·0 per cent. Of the medically attended births there were 166 still-births among home cases, representing a rate of 3·3, and 526 in institutions, equal to a rate of 7·1. Together, the rate indicated is 5·6. Among non-medically attended births there were 258 which is equivalent to a rate of 2·3.

CHILD WELFARE SCHEME.

One new centre was opened during the year, namely Gorbals Clinic. This clinic was built in Florence Street adjacent to the old premises in Adelphi Street which had been in use for the past twenty years. The new clinic is described in a brochure issued for the opening ceremony, which took place on 16th June.

The Gorbals Clinic is the second of a series of large combined centres to be erected by the Corporation. It will serve the area of the City to the south of the River Clyde and to the east of Bridge Street and Eglinton Street.

The building is necessarily large, since it has accommodation for Maternity and Child Welfare Services, Education Health Service (including Orthopaedics), a Dental Clinic, as well as a Tuberculosis Clinic, a clinic for Outdoor Medical Services for Public Assistance cases, and a small clinic for the treatment of Trachoma. These last three services were incorporated in the general scheme after the main building had been planned and they have been provided in an extension.

The Child Welfare Clinic is on the ground floor and is designed on modern lines. There is a demonstration room for the teaching of mothercraft, where models and specimens will be on view. The large common waiting hall can be used for lecture purposes and also for demonstrations

on subjects such as cookery. On one side of the lecture hall there is an alcove shut off by folding doors where the necessary apparatus for these demonstrations has been installed.

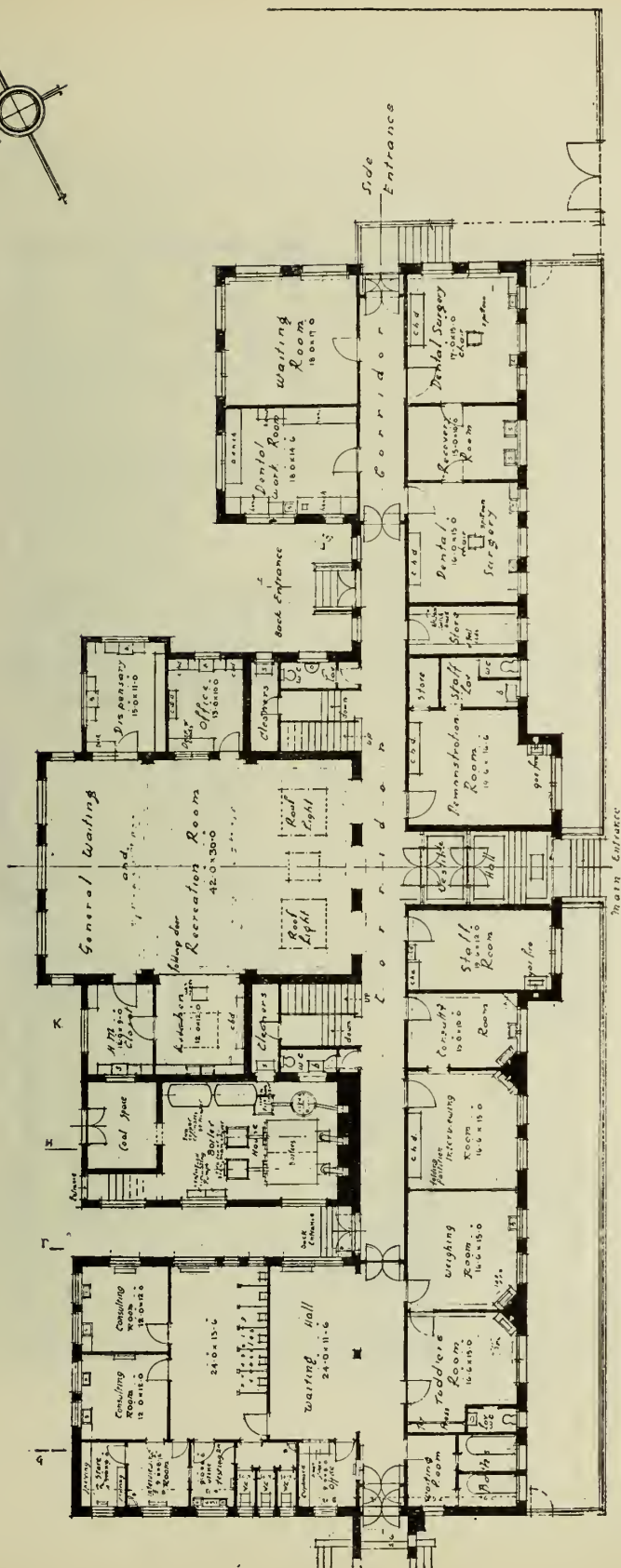
The Ante-Natal Clinic is also on the ground floor and consists of a small waiting room, two consulting rooms, and the necessary offices. The unit is designed for easy and rapid working according to the routine which has been developed in other clinics.

The Dental Clinic is also on the ground floor and consists of two dental surgeries equipped with up-to-date apparatus, a waiting room, recovery room, and also a dental workshop. This unit will serve the needs of Child Welfare, Education Authority, and Maternity Services.

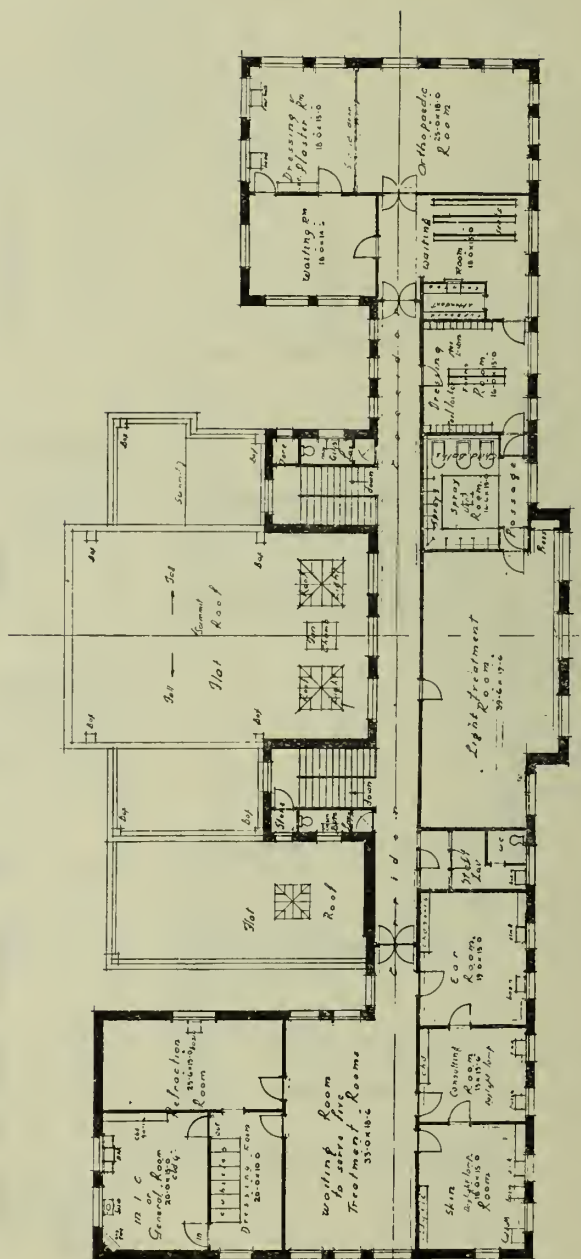
Education Health Services are given the whole of the first floor in the main building. There are waiting rooms, and consulting rooms for general and special purposes such as diseases of the skin, ear, eye, etc., conditions which are prevalent among school children and where early correction of the abnormality will help to ensure healthy growth and sound physique. In this section there is also an Orthopaedic Department which will be the home of a clinic where all sorts of deformities caused by disease or due to faulty physical development will be dealt with. This clinic will operate in conjunction with the Education and Child Welfare Clinics and also with Mearns Kirk Hospital for Children. It will form the means of keeping in close contact with patients who have been discharged from hospital after treatment. Provision is also made for treatment by artificial sunlight, and this unit contains an adequate range of spray baths.

The extension which has been added to the main building will house the Tuberculosis Clinic, Outdoor Medical Services, and the Trachoma Clinic. On the first floor there is accommodation for an X-Ray Department. A caretaker's house is also incorporated.

The Tuberculosis and Outdoor Medical Service Clinics are so placed that the same office and the same pharmacy serve both. The Outdoor Medical Services in this area are particularly busy, and four medical consulting rooms have been provided. Dressing cubicles are placed between each pair of consulting rooms. The Trachoma Clinic adjoins the Outdoor Medical Services unit and the accommodation between these two units is, to some extent, interchangeable. Trachoma is a disease of the eyes which is of a very chronic and persistent character, and in Glasgow appears to be largely confined to the Gorbals area.



GORBALS SCHOOL AND CHILD WELFARE CLINIC, PLAN OF FIRST FLOOR.



The Tuberculosis Clinic is designed as a consulting centre and the suggested X-Ray Department is situated directly above it.

While there is a common hall, it should be observed that the building is so designed that the different sections can function separately without interfering with each other. Almost every service has its own entrance, yet there is easy communication throughout the whole building.

Externally the buildings are finished in bands of multi-coloured facing brick and of coloured cement plaster. The original part of the building is roofed in slate, while the extension is flat roofed. The flooring in the original part is of wood covered with rubber, and in the extension use is made of Korkoid flooring on top of a reinforced concrete sub-floor. Throughout the building care has been taken to ensure the maximum of natural light and ventilation in all Departments. Heating is by hot-water radiators throughout, and the heating chamber, which is in the basement, contains coal-fired boilers with automatic stokers.

The plans for these clinics were prepared by the architectural staff of the Office of Public Works under the direction of Mr. Thomas Somers, M.Inst.C.E., City Engineer, in collaboration with the Medical Officer of Health.

WORK OF THE MATERNITY AND CHILD WELFARE CENTRES.

The number of centres remains the same as for the preceding year but certain minor alterations were made. In two instances the hour of session was changed from the afternoon to the forenoon, while one additional consultation was begun at two of the centres. The number of weekly sessions at the fourteen centres is now 87 compared with 85 (26 ante-natal, 55 child welfare, and 6 ultra-violet ray treatment). In addition to these, clinics were conducted at the Elderpark Welfare Centre and at the Royal Maternity Hospital.

LIST OF MATERNITY AND CHILD WELFARE CLINICS.

	9 a.m.	1.30 p.m.
MONDAY,	15 Glenbarr Street, Provan. 106 Orr Street. 150 Wellshot Road, Shettleston. 26 Florence Street (—1 year). 2 Summerton Road, Govan (Ante-natal). 20 Arklet Road, Elder Park (Ante-natal). 33 Richard Street (Ante-natal). 1 Burgh Hall Street, Partick (—1 year).	15 Glenbarr Street, Provan (Ante-natal). 20 Cochrane Street (Ultra-Violet Ray). 33 Richard Street 1 Burgh Hall Street, Partick (Ante-natal). 60 Avenuepark Street. 106 Orr Street. 150 Wellshot Road, Shettleston (Ante-natal). 26 Florence Street (—1 year). 2 Summerton Road, Govan (Ultra-Violet Ray). 614 Dobbie's Loan (Ante-natal).

9 a.m.

1.30

TUESDAY, 33 Richard Street (1-5 years).
 194 Fernbank Street, Springburn.
 60 Avenuepark Street (Ante-natal).
 150 Wellshot Road, Shettleston.
 15 Glenbarr Street, Provan.
 2 Summerton Road, Govan.
 106 Orr Street.
 26 Florence Street.
 614 Dobbie's Loan.

WEDNESDAY, 20 Cochrane Street (Ultra-Violet Ray).
 33 Richard Street (-1 year).
 60 Avenuepark Street.
 614 Dobbie's Loan.
 18 Plean Street, Blawarthill (1-5 years).
 106 Orr Street (Ante-natal).
 26 Florence Street (1-5 years).
 132 Weir Street.
 2 Summerton Road, Govan (Ultra-Violet Ray).
 150 Wellshot Road, Shettleston.

THURSDAY, 614 Dobbie's Loan.
 106 Orr Street (Ante-natal).
 15 Glenbarr Street (Ante-natal).
 26 Florence Street (1-5 years).
 132 Weir Street.
 33 Richard Street (-1 year).
 2 Summerton Road, Govan (Ante-natal).
 194 Fernbank Street, Springburn.
 20 Cochrane Street.

FRIDAY, 18 Plean Street, Blawarthill (-1 year).
 194 Fernbank Street, Springburn (Ante-natal).
 614 Dobbie's Loan (Ante-natal).
 60 Avenuepark Street.
 106 Orr Street (Ante-natal).
 150 Wellshot Road, Shettleston.
 26 Florence Street (1-5 years).
 2 Summerton Road, Govan.
 20 Cochrane Street.
 15 Glenbarr Street, Provan.

33 Richard Street (Ante-natal).
 1 Burgh Hall Street, Partick (-1 year).
 614 Dobbie's Loan (Ante-natal).
 2 Summerton Road, Govan.
 106 Orr Street.
 150 Wellshot Road, Shettleston.
 26 Florence Street (Ante-natal).
 20 Arklet Road, Elder Park (Ante-natal).
 194 Fernbank Street, Springburn.
 18 Plean Street, Blawarthill (Ante-natal).

194 Fernbank Street, Springburn (Ante-natal).
 106 Orr Street.
 26 Florence Street (Ante-natal).
 2 Summerton Road, Govan.
 132 Weir Street.

1 Burgh Hall Street, Partick (1-5 years).
 60 Avenuepark Street (Ante-natal).
 614 Dobbie's Loan.
 106 Orr Street.
 150 Wellshot Road, Shettleston (Ante-natal).
 26 Florence Street (-1 year).
 132 Weir Street.
 2 Summerton Road, Govan (Ante-natal).

20 Cochrane Street (Ultra-Violet Ray).
 614 Dobbie's Loan.
 106 Orr Street.
 2 Summerton Road, Govan (Ultra-Violet Ray).
 20 Arklet Road, Elder Park.
 26 Florence Street (Ante-natal).
 15 Glenbarr Street, Provan.

Elderpark Infant Consultations—Monday, Wednesday, and Thursday, at 1.30 p.m.

Maternity Hospital Ante-Natal Clinics—Daily, Monday to Friday, at 1.30 p.m., Saturday, 9.30 a.m. -1 year Clinics, Monday, Wednesday, and Friday, 9 a.m. Vaccination is also done at 20 Cochrane Street on Tuesdays at 12.30 p.m.

WELFARE CENTRES FOR EXPECTANT AND NURSING MOTHERS AND CHILDREN UNDER FIVE YEARS OF AGE.

ADDRESS OF CENTRE.	DISTRICT SERVED.	CLINICS FOR CHILDREN AND NURSING MOTHERS.	CLINICS FOR EXPECTANT MOTHERS.
20 Cochrane Street	Exchange, Park, and Blythswood (part).	Thursday, 9 a.m. ...	—
1 Burgh Hall Street	Partick (East) and Partick (West).	Friday, 9 a.m. ... Monday, 9 a.m. ... Tuesday,* 1.30 p.m. Thursday,† 1.30 p.m.	Monday, 1.30 p.m.

ADDRESS OF CENTRE.	DISTRICT SERVED.	CLINICS FOR CHILDREN AND NURSING MOTHERS.	CLINICS FOR EXPECTANT MOTHERS.
33 Richard Street	Anderston, Sandyford, Blythwood (part), and Kelvinside.	Monday, 1.30 p.m. ... Tuesday, † 9 a.m. ... Wednesday, * 9 a.m. ... Thursday, * 9 a.m. ...	Monday, 9 a.m. Tuesday, 1.30 p.m.
18 Plean Street	Whiteinch and Knightswood.	Wednesday, † 9 a.m. Friday, * 9 a.m. ...	Wednesday, 1.30 p.m.
614 Dobbie's Loan	Cowcaddens, Wood- side, and Town- head (part).	Tuesday, 9 a.m. ... Wednesday, 9 a.m. ... Thursday, 9 a.m. ... Thursday, 1.30 p.m. Friday, 1.30 p.m. ...	Monday, 1.30 p.m. Tuesday, 1.30 p.m. Friday, 9 a.m.
60 Avenuepark St.	Maryhill and North Kelvin.	Monday, 1.30 p.m. ... Wednesday, 9 a.m. ... Friday, 9 a.m. ...	Tuesday, 9 a.m. Thursday, 1.30 p.m.
194 Fernbank Street	Cowlairs, Springburn, and Ruchill.	Tuesday, 9 a.m. ... Tuesday, 1.30 p.m. ... Thursday, 9 a.m. ...	Wednesday, 1.30 p.m. Friday, 9 a.m.
15 Glenbarr Street	Provan, Townhead (part), and Cow- caddens (part).	Monday, 9 a.m. ... Tuesday, 9 a.m. ... Wednesday, 9 a.m. ... Friday, 9 a.m. ... Friday, 1.30 p.m. ...	Monday, 1.30 p.m. Thursday, 9 a.m.
106 Orr Street ...	Dalmarnock, Calton, Mile-end, Whitevale, Dennistoun, and Parkhead (part).	Monday, 9 a.m. ... Monday, 1.30 p.m. ... Tuesday, 9 a.m. ... Tuesday, 1.30 p.m. ... Wednesday, 1.30 p.m. Thursday, 1.30 p.m. Friday, 1.30 p.m. ...	Wednesday, 9 a.m. Thursday, 9 a.m. Friday, 9 a.m.
150 Wellshot Road	Shettleston and Park- head (part).	Monday, 9 a.m. ... Tuesday, 9 a.m. ... Tuesday, 1.30 p.m. ... Wednesday, 9 a.m. ... Friday, 9 a.m. ...	Monday, 1.30 p.m. Thursday, 1.30 p.m.
26 Florence Street	Hutchesontown Gor- bals, Camphill, Pol- lokshaws, Govan- hill, Langside, and Cathcart.	Monday, * 9 a.m. ... Monday, * 1.30 p.m. ... Tuesday, 9 a.m. ... Wednesday, † 9 a.m. Thursday, † 9 a.m. ... Thursday, * 1.30 p.m. Friday, † 9 a.m. ...	Tuesday, 1.30 p.m. Wednesday, 1.30 p.m. Friday, 1.30 p.m.
2 Summerton Road	Govan (part), Kinning Park (part), and Pollokshields (part).	Tuesday, 9 a.m. ... Tuesday, 1.30 p.m. ... Wednesday, 1.30 p.m. Friday, 9 a.m. ...	Monday, 9 a.m. Thursday, 9 a.m. Thursday, 1.30 p.m.
132 Weir Street ...	Kingston, Kinning Park (part), and Pollokshields (part).	Wednesday, 9 a.m. ... Wednesday, 1.30 p.m. Thursday, 9 a.m. ... Thursday, 1.30 p.m.	—
20 Arklet Road ...	Fairfield and Govan (part).	Monday, 1.30 p.m. ... Wednesday, 1.30 p.m. Thursday, 1.30 p.m. Friday, 1.30 p.m. ...	Monday, 9 a.m. Tuesday, 1.30 p.m.
Maternity Hospital, Rottenrow ...	—	Monday, * 9 a.m. ... Wednesday, * 9 a.m. Friday, * 9 a.m. ...	Monday, 1.30 p.m. Tuesday, 1.30 p.m. Wednesday, 1.30 p.m. Thursday, 1.30 p.m. Friday, 1.30 p.m. Saturday, 9.30 a.m.

* Clinics for infants under one year of age.

† Clinics for children from one to five years of age.

The total number of attendances at the infant consultations during 1937 was 177,627, compared with 163,059 during 1936. The primary attendances of infants were 9,634, compared with 9,010 during the preceding year. The number of consultations held during 1937 was 2,856, compared with 2,852 for the preceding year. For every primary attendance there were 15 subsequent attendances, the same as for the preceding year.

The following table gives the attendance at each consultation centre during the years 1936 and 1937 :—

ATTENDANCES AT INFANT CONSULTATIONS, 1937.

	No. of of Con- sulta- tions held.	No. Children—1 year.		Children + 1 year.		Total		1936—Total	
		No. of Attendances.		No. of Attendances.		No. of Attendances.		No. of Attendances.	
		Prim.	Sub.	Prim.	Sub.	Prim.	Sub.	Prim.	Sub.
Gorbals ...	355	1,516	13,143	242	11,490	1,758	24,633	1,571	22,710
Cowcaddens ...	256	785	6,919	121	6,846	906	13,765	916	13,289
Elder Park ...	200	597	5,719	133	4,878	730	10,597	767	10,714
Provan ...	207	741	8,043	180	5,088	921	13,131	955	12,063
Govan ...	207	584	5,921	100	4,152	684	10,073	620	9,197
Orr Street ...	352	1,375	14,996	185	8,856	1,560	23,852	1,421	20,219
Maryhill ...	151	623	6,562	80	3,596	703	10,158	687	8,546
Partick ...	153	359	3,539	57	2,668	416	6,207	347	6,193
Richard Street	203	486	5,131	90	4,714	576	9,845	591	9,473
Shettleston ...	255	884	10,432	139	6,871	1,023	17,303	951	16,676
Weir Street ...	206	422	4,740	82	3,730	504	8,470	494	8,408
Cochrane Street	52	252	2,247	71	2,290	323	4,537	264	3,146
Springburn ...	156	648	5,543	82	3,377	730	8,920	635	8,365
Blawarthill ...	103	362	3,219	69	1,652	431	4,871	323	3,518
	2,856	9,634	96,154	1,631	70,208	11,265	166,362	10,542	152,517
		105,788		71,839		177,627		163,059	

SUPPLY OF MILK TO NECESSITOUS MOTHERS AND CHILDREN.

The arrangements for supplying milk to expectant and nursing mothers and to children up to five years of age were continued on the same lines as for previous years. Grants are subject to the following conditions :—

- (1) Regular attendance at a child welfare centre ;
- (2) Certification by the medical officer at the centre that milk is required on grounds of health ; and
- (3) Necessity according to a scale approved by the Corporation.

Except where conditions of health require a more frequent attendance, infants are not expected to be brought more often to the centres than once a fortnight and toddlers once in six weeks. Investigations as to the necessitousness of applicants are made on behalf of the Department by the Public Assistance Department. The period for which supplies are granted is six weeks at a time, during which one pint of fresh milk per day or one packet of dried milk per week is allowed.

The following tables summarize the applications and grants for the year 1937 :—

	Fresh Milk.	Dried Milk.	Together.
Applications granted	34,921	5,778	40,699
Applications refused as income over scale	1,336	295	1,631
	<u>36,257</u>	<u>6,073</u>	<u>42,330</u>
<i>Applications Granted—</i>			
Nursing and Expectant Mothers ...	6,118	1,709	7,827
Children under 1 year	8,580	2,785	11,365
Children aged 1-5 years	20,223	1,284	21,507
	<u>34,921</u>	<u>5,778</u>	<u>40,699</u>

The number of persons supplied under the scheme, the total quantities supplied, and the cost involved are shown below :—

No. of Persons supplied*	Fresh Milk. (Tuberculin Tested, Pasteurised)†		Dried Milk. (Ostermilk).	
	Mothers.	Children.	Mothers.	Children.
... ..	2,476	7,525	774	1,183
Total Quantity supplied	248,015 pts.	1,184,363 pts.	8,736 pkts.†	22,793 pkts.
Total Cost	£2,876	£13,732	£546	£1,425
Maximum Daily No. of Persons supplied	4,258		812	
Minimum Daily No. of Persons supplied	3,689		335	
Average Daily No. of Persons supplied	3,924		623	

* 94 Mothers and 404 Children were supplied with fresh milk for a part of the year and dried milk for another part of the year. These are included in the figures shown above for persons supplied with fresh milk and excluded from the figures for dried milk.

† Quantity in each packet=18 ozs. approximately.

‡ As from 1st June, 1937; previously "Ordinary, Pasteurised."

In addition to the above, 22,526 packets of Dried Milk were supplied at cost price to mothers and children where the family income was above the scale of necessity. Dietary supplements as shown below were also issued from the Centres :—

	Lbs.	Cost.
Cod Liver Oil	8,342	£597
Cod Liver Oil Emulsion	19,503	764
Parrish's Chemical Food	4,606	247
Malt and Oil	228	6
Sundries	110	14
	<u>32,789</u>	<u>£1,628</u>

Certificates for free grants for fresh and dried milk were given by the medical officers at the Centres for the following reasons :—

	Nursing and Expectant Mothers.	Children. —1 year.	—5 years.	Total.
Debility	246	72	94	412
Progressing	—	328	281	609
Insufficiency of Breast Milk	7,547	—	—	7,547
Child Losing Weight	—	29	125	154
Child under Weight	—	10,587	19,964	30,551
Child's Weight Stationary	—	25	109	134
Malnutrition	—	33	30	63
Marasmus	—	1	—	1
<i>Debility after—</i>				
Infectious Diseases	—	43	121	164
Other Diseases	3	60	106	169
<i>Infectious Diseases—</i>				
Measles	—	—	3	3
Whooping Cough	—	36	61	97
Chickenpox	—	4	10	14
<i>General Diseases—</i>				
Anaemia	18	12	23	53
Rickets	—	68	499	567
<i>Diseases of the Respiratory System—</i>				
Bronchitis	4	54	60	118
Pneumonia	—	11	15	26
<i>Others—</i>				
Enteritis	—	2	5	7
Albuminuria	9	—	—	9
Influenza	—	—	1	1
Totals	<u>7,827</u>	<u>11,365</u>	<u>21,507</u>	<u>40,699</u>

SEWING, &c., CLASSES.

During the winter months a considerable amount of social and welfare work was carried on at the various Child Welfare Centres. This took the form of sewing and cookery classes, etc., as shown in the following table :—

Centre.		Nature of Class.	Period.	Day and Hours.	Average Attendance.
Cowcaddens	...	Sewing Class	Nov. to Dec.	Mon., 7 p.m. ...	38
Do.	...	Play Centre	Nov. to Mar.	Mon., 6 p.m. ...	50
Do.	...	Keep Fit Class	Jan. to April	Mon., 7 p.m. ...	24
Partick	...	Sewing Class	Oct. to Mar.	Wed., 7.30 p.m. ...	50
Richard Street	...	Mother's Club	Sept. to June	Thurs., 2 p.m. ...	70
Do.	...	Keep Fit Class	Sept. to June	Mon., 7 p.m. ...	25
Maryhill	...	Sewing Class	Oct. to Mar.	Tues., 7 p.m. ...	40
Springburn	...	Sewing Class	Oct. to Mar.	Mon., 7.30 p.m. ...	35
Shettleston	...	Sewing Class	Oct. to April	Wed., 7 p.m. ...	75
Do.	...	Cookery Class	Oct. to April	Wed., 7 p.m. (occasional class)	75
Do.	...	Thrift Club	Oct. to April	Wed., 7 p.m. ...	40
Bridgeton	...	Mother's Club	Oct. to Mar.	Tues., 7 p.m. ...	40
Do.	...	Keep Fit Class	Oct. to Mar.	Tues., 7 p.m. ...	40
Arklet Road	...	Mother's Assoc.	Oct. to Mar.	Wed., 7 p.m. ...	50
Do.	...	Singing Class	Oct. to Mar.	Mon., 7.30 p.m. ...	18
Do.	...	Men's Section	Oct. to Mar.	Fri., 7.30 p.m. ...	20
Do.	...	Children's Play			
	Hour	...	Sept. to June	Wed. and Fri., 10 a.m. ...	30
Govan Town Hall	...	Mother's Club	Oct. to Mar.	Thurs., 7 p.m. ...	50
Provan	...	Sewing Class	Oct. to Mar.	Every alternate Wed., 7 p.m.	20

Men's Section.—The Elderpark Welfare Association in Govan district continued its activities throughout the winter. A programme is arranged each year and consists of talks by well-known public speakers and whist drives in the winter and outings during the summer months and by co-operation between the members of the Voluntary Committee 58 children were entertained to a party at Christmas.

ANTE-NATAL CONSULTATIONS.

Glasgow Royal Maternity Hospital.—The total number of cases attending the ante-natal dispensary for the first time was 4,131 during 1937, compared with 4,324 in 1936, while the total attendances during the respective years were 18,164 and 17,976. During 1937, 2,811 cases were treated to a termination in delivery, of which 897 were attended in their own homes.

The number admitted to the ante-natal wards during 1937 was 1,574, compared with 1,475 in 1936.

At the infant consultations held at the Maternity Hospital there were 4,278 attendances, as compared with 5,255 during the previous year. The first attendances numbered 424.

	1935.	1936.	1937.
ANTE-NATAL DISPENSARY—			
Number attending for first time	4,455	4,324	4,131
Total attendances	16,635	17,976	18,164
Number treated to a termination	2,946	2,724	2,811
Number sent to Hospital—			
(a) For confinement	1,366	1,250	1,380
(b) For miscarriage	64	62	59
(c) For ante-natal treatment	564	538	561
(d) For ante-natal treatment and confinement	344	366	452
(e) For ante-natal treatment and miscarriage	44 ^{ab}	36	23
Number treated on District—			
(a) For confinement	1,118	999	891
(b) For miscarriage	10	11	6
ANTE-NATAL WARDS—			
Average number under treatment	39	43	46
Number admitted	1,325	1,475	1,574
Total days	14,374	15,785	16,076
Condition on dismissal—			
(1) Recovered	275	149	307
(2) Improved	207	197	273
(3) Transferred to Labour Ward for confinement	945	981	800
(4) Died	10	8	5
(5) No change	123	135	117
INFANT CONSULTATION—			
First attendance	523	506	424
Subsequent attendances	4,655	4,749	3,854
Total	<u>5,178</u>	<u>5,255</u>	<u>4,278</u>

The total number of sessions at the Ante-Natal Clinics during 1937 was 1,317, compared with 1,313 during the preceding year, the attendances totalling 47,330, against 44,424 in 1936. Primary attendances numbered 8,838, or 417 more than in the previous year, while the subsequent attendances, 38,492, were higher by 2,489. The rapid growth of this work during recent years following the introduction of the Rule of the Central Midwives Board making it compulsory for midwives to

secure ante-natal supervision for those engaging their services has apparently lessened, and the position is now more stabilised. The number of consultations and attendances at each Centre are shown in the following table :—

ATTENDANCES AT ANTE-NATAL CLINICS, 1937.

				No. of Clinic. Sessions.	No. of Attendances.		
					Primary.	S'sequent.	Total.
Partick	...	...	...	48	337	1,373	1,710
Cowcaddens	...	...	...	152	638	2,495	3,133
Maryhill	...	...	...	104	534	2,415	2,949
Springburn	...	...	...	103	576	2,661	3,237
Bridgeton	...	...	...	155	918	4,307	5,225
Shettleston	...	...	...	100	750	3,410	4,160
Gorbals	...	...	...	152	1,795	7,598	9,393
Govan ...	...	...	...	152	1,124	4,503	5,627
Elderpark	...	...	...	100	607	3,403	4,010
Anderston	...	...	...	100	662	2,445	3,107
Blawarthill	...	...	...	51	308	1,301	1,609
Provan	...	...	...	100	589	2,581	3,170
				<hr/>	<hr/>	<hr/>	<hr/>
				1,317	8,838	38,492	47,330

The following table shows the age of mothers who attended :—

								Totals.	
Ages of Mothers								1936.	1937.
—20	...	...	...	...	...	...	...	469	490
—25	...	...	...	...	...	...	...	2,348	2,477
—30	...	...	...	...	...	...	...	2,411	2,620
—35	...	...	...	...	...	...	...	1,694	1,799
—40	...	...	...	...	...	...	...	1,035	1,003
—45	...	...	...	...	...	...	...	273	274
+45	...	...	...	...	...	...	...	20	12
Not pregnant	...	...	...	...	...	...	...	171	163
								<u>8,421</u>	<u>8,838</u>

The conditions found on medical examination are enumerated in the following statement, but, as in many cases, two or three causes of illness were present, the total number of conditions is much in excess of the

number of mothers. The most frequent conditions requiring attention were those of dental disease, the alimentary system (including constipation), general debility, varicose veins, and albuminuria.

CONDITIONS FOUND DURING PREGNANCY.

						Totals.	
						1936.	1937.
Alimentary Conditions	...	...	...	...	...	1,801	1,184
Hyperemesis	...	...	...	...	...	32	17
Dental Disease	...	...	...	...	...	2,722	2,537
Anaemia	...	...	...	...	...	612	565
Debility	...	...	...	...	...	804	761
Cardiac Disease	...	...	...	...	...	192	136
Respiratory	...	...	...	...	...	381	314
Rheumatism	...	...	...	...	...	19	20
Chorea	...	...	...	...	...	5	1
Varicose Veins	...	...	...	...	...	986	716
Albuminuria	...	...	...	...	...	1,607	1,639
Albuminuria and Pyuria	...	...	...	...	...	44	15
Pyelitis	...	...	...	...	...	21	27
Oedema without Albuminuria	...	...	...	...	...	157	96
Venereal Disease	...	...	...	...	...	89	99
Other Conditions	...	...	...	...	...	506	439
Total	...	...	...	...	...	9,978	8,566

OBSTETRIC CONDITIONS.

						Totals.	
						1936.	1937.
Contracted Pelvis	...	...	...	...	...	250	214
Malpresentation—							
(a) Corrected	...	...	...	...	...	251	177
(b) Persistent	...	...	...	...	...	61	100
Multiple Pregnancy	...	...	...	...	...	82	81
Hydramnios	...	...	...	...	...	24	21
Ante-Partum Haemorrhage	...	...	...	...	...	64	39
Threatened Abortion and Miscarriage	...	...	...	...	...	92	109
Threatened Premature Labour	...	...	...	...	...	49	52
Other Conditions	...	...	...	...	...	142	38
Total	...	...	...	...	...	1,015	831

Of the total cases examined during the year (8,838), there were 163 found not to be pregnant. Among the others, 1,646 were primiparous and 7,029 multiparous, or 19 and 79 per cent. respectively.

The results, so far as known, as to whether delivery resulted at full term, prematurely, etc., are here given, together with the number of still-births :—

CASES TERMINATED DURING 1937.

					Previous Year's Cases.	This Year's Cases.	Total.
Alive—							
Full Term ...	...	...	...	...	1,807	5,724	7,531
Premature	...	...	...	...	74	329	403
Still Births—							
Full Term ...	...	...	...	...	40	152	192
Premature	...	...	...	...	24	77	101
Abortion or Miscarriage	...	...	...	...	12	115	127
Left district and not traced	...	...	...	...	24	91	115
Not pregnant	...	...	...	...	18	163	181
Died before termination	...	...	...	...	—	3	3
Not terminated	...	...	...	...	—	2,261	2,261
					1,999	8,915	10,914
Twin Births ...	...	...	...	...	27	77	104
Triplet Births	...	...	...	...	—	—	—

The following table shows the attendances at confinement :—

Number of patients delivered by :—					1936.	1937.
Midwife ...	...	...	...	...	1,742	1,720
General Practitioner	...	...	...	...	154	124
In Hospital	...	...	...	...	2,319	2,619
By Outdoor Staff	...	...	...	...	1,966	1,845
No attendance, Uncertified, etc.	...	...	...	...	15	12
					6,196	6,320

Among the 7,934 patients whose pregnancy terminated in 1937 (excluding abortions), 29 deaths occurred, giving a death-rate of 3.7 per 1,000 births. The rate for 1936 was 4.7. Of the 5 deaths from septic conditions, 1 was associated with influenza and broncho-pneumonia, 2 with broncho-pneumonia, 1 with pulmonary embolism and cerebral thrombosis, and 1 with cerebral thrombosis.

Other deaths among these patients were as follows :—

Puerperal Haemorrhage	3
Puerperal Albuminuria and Convulsions	4
Puerperal Phlegmasia Alba Dolens, Embolism or Sudden Death	1
Other Accidents of Childbirth	3
Others or Unspecified Conditions of the Puerperal State ...	1
Dysentery	1
Pulmonary Tuberculosis	3
Toxaemia	1
Nervous Diseases	1
Circulatory Diseases	2
Respiratory Diseases	3
Other Diseases	1

Thus 12 deaths had probably little association with the puerperal state, although in some it may have been a contributing cause. Excluding these deaths, and comparing with a rate of 4·96 for the City as a whole, the maternal mortality may be more correctly stated as 2·1. As regards the ante-natal service, it may be pointed out that only 35 per cent. of pregnant women attending the clinics came before the sixth month, and 78 per cent. before the seventh month.

The number of still-births, 293, occurring among the pregnancies included in this analysis represents a rate of 3·7 per cent., compared with the average for the City of 4·0 per cent. The still-births among the cases which attended during the previous year amounted to 3·3 per cent.

A comparison of the births occurring at full time or otherwise shows that during 1937 premature births formed about 5·1 per cent. of the total, as compared with 5·7 per cent. for the previous year. Abortions equalled 1·6 per cent. of the pregnancies, which is the same as for the preceding year.

The month of pregnancy at which the first attendance was made at the clinic is given below; almost two-thirds attended by the seventh month :—

Month of Attendance.	Total.	Per Cent.
1	6	8
2	235	
3	489	
4	826	
5	1,458	17
6	2,035	23
7	2,138	25
8	1,241	14
9	247	3
Not pregnant	163	—
	<u>8,838</u>	<u>100</u>

DENTAL TREATMENT FOR EXPECTANT MOTHERS.

The scheme approved by the Corporation in 1935 to provide dental treatment for necessitous and partly necessitous mothers in need of treatment has been continued throughout the year at Provan Clinic, and in September, 1937, a similar unit, consisting of a waiting-room, surgery, recovery room, and workshop at Gorbals Clinic commenced work. At the end of the year the staff at the clinics consisted of 2 full-time Dentists, 2 Nurses, 2 Dental Mechanics, 2 Improvers, and 2 Plaster Boys.

The number of applications for treatment received during the year was 1,271. In 60 cases the family income was over the scale of necessity and the patients were referred elsewhere; 10 applications were withdrawn by the patients; 18 applications were not accepted for various reasons, such as failure to reply to letters, removal, etc.; and at the end of the year 35 applications had not been completed. The remaining 1,148 cases were wholly or partly necessitous, as shown in the following list :—

	No.	Percentage.
Wholly necessitous—treatment to be provided free of cost to the patient ...	1,001	87·2
Partly necessitous—to pay one-fifth of the nominal cost ...	42	3·7
—to pay two-fifths ...	47	4·1
—to pay three-fifths ...	29	2·5
—to pay four-fifths ...	29	2·5
Total	<u>1,148</u>	

Seven of the cases included above were chargeable to Approved Societies generally to the extent of 50 per cent. of the nominal cost.

Applicants to the number of 122 had not appeared for examination by the close of the year.

The following figures show the work done during the complete year at Provan Clinic and during part of the year at Gorbals Clinic. A certain amount of the work completed at Gorbals Clinic had been commenced at Provan Clinic; at Gorbals Clinic approximately 40 per cent. of the dentist's time was devoted to treatment of school children, pending the development of a full programme of ante-natal dentistry.

	Provan.	Gorbals.	Total.
Primary attendances for examination and estimate	823	285	1,108
Primary attendances for treatment	689	212	901
Subsequent attendances for treatment	2,752	364	3,116
Attendances—no treatment given	65	7	72
Total attendances	<u>4,329</u>	<u>868</u>	<u>5,197</u>

Extractions	...	...	...	...	...	11,944	3,589	15,533
Fillings	...	...	...	...	...	32	2	34
Scalings (Patients)	...	...	...	...	...	21	3	24
Dressings	...	...	...	...	...	53	12	65
Full Upper Dentures completed	...	...	...	...	...	515	60	575
Full Lower Dentures completed	...	...	...	...	...	475	56	531
Partial Dentures completed	...	...	...	...	...	16	2	18
Other Dentures not yet completed	...	...	...	...	...	15	37	52
Repairs	...	...	...	...	...	12	3	15
Other Dental Operations (Patients' attendances)	...	...	...	...	...	1,285	169	1,454

As a general rule, extractions were completed ante-natally and dentures inserted post-natally. All extractions were executed under local anaesthesia.

The charges made in part payment cases ranged generally from 6s. to 24s. for an Upper or Lower Denture (with any necessary extractions and other preparatory work), and from 12s. to 48s. for full dentures, also with any necessary preparatory work. The sums to be paid in individual cases were determined according to the scale of necessity approved by the Corporation. Half of the sum so determined was payable before the extractions or other preparatory work commenced, and the other half before the making of the dentures was put in hand.

MATERNAL MORTALITY.

Enquiry into maternal deaths has been continued as a routine procedure during the year. This practice was begun at the close of 1929 under arrangement made by the Department of Health and the British Medical Association.

The following statement showing the maternal mortality deaths and rates is from figures supplied by the Registrar-General:—

STATEMENT SHOWING MATERNAL DEATHS AND RATES PER 1,000 BIRTHS IN GLASGOW AND SCOTLAND IN THE YEARS 1932-37.

	Deaths.					Rate per 1,000 Births.				
	1933.	1934.	1935.	1936.	1937.	1933.	1934.	1935.	1936.	1937.
Accidents of Pregnancy	...	4	4	9	9	9	0.19	0.18	0.40	0.40
Puerperal Haemorrhage	...	28	24	23	18	15	1.31	1.10	1.04	0.80
Puerperal Septicaemia, including Post-abortion sepsis	...	63	64	75	58	46	2.95	2.93	3.39	2.61
Toxaemia of Pregnancy, Albuminuria, Convulsions	...	13	13	22	25	21	0.61	0.60	1.00	1.12
Other Puerperal Diseases	...	18	27	26	21	19	0.84	1.24	1.18	0.94
Totals—Glasgow	...	126	132	155	131	110	5.90	6.05	7.01	5.87
Scotland	...	—	551	555	494	424	5.92	6.20	6.31	5.55

During the year 110 deaths occurred from maternal causes, equivalent to a rate of 4.96 per 1,000 births, which compares with a rate of 5.87 for the previous year. The principal cause of the decrease was puerperal septicaemia.

ULTRA-VIOLET RAY CLINICS.

No alteration has taken place in the arrangements for light treatment of children suffering from rickets, malnutrition, etc.

The number of consultations held weekly at Cochrane Street and Govan Town Hall remain the same as at the end of last year.

The installation and the results of treatment have been fully dealt with in previous reports, so that only the records of numbers treated are here given in respect of 1937.

RECORD OF ATTENDANCES AND CONSULTATIONS DURING 1937.

	Number of Clinics held.	Children —1 year. Number of Attendances.		Children +1 year. Number of Attendances.		Mothers. Number of Attendances.		Total Number of Attendances.	
		Prim.	Sub.	Prim.	Sub.	Prim.	Sub.	Prim.	Sub.
Cochrane Street	... 148	57	536	520	11,151	19	189	596	11,876
Govan	... 145	36	224	210	5,610	4	36	250	5,870
	293	93	760	730	16,761	23	225	846	17,746
		853		17,491		248		18,592	

AGES OF CHILDREN ATTENDING FOR THE FIRST TIME—

								Cochrane Street.	Govan.
-1 year	...	...	...	...	...	...	...	57	36
-2 years	...	...	...	...	...	...	...	314	127
-3 years	...	...	...	...	...	...	...	119	44
-4 years	...	...	...	...	...	...	...	62	20
-5 years	...	...	...	...	...	...	...	25	5
+5 years	...	...	...	...	...	...	...	—	14
								577	246

REASONS FOR TREATMENT OF CASES ATTENDING FOR FIRST TIME.

						Cochrane Street.	Govan.
CHILDREN—							
Rickets.	1. Prophylaxis	...	...	...	...	—	—
	2. Early Rickets	...	...	...	...	46	89
	3. Moderate Rickets	...	...	...	...	289	72
	4. Marked Rachitic deformity	...	...	...	...	66	26
Debility after acute illness						26	15
Debility—weight stationary, or losing, or not thriving						79	16
Bronchitis ...						23	16
Malnutrition ...						12	—
Marasmus ...						—	—
Nervous Instability						—	1
Skin Diseases						—	—
Cervical Adenitis						5	8
Others						31	3
						<u>577</u>	<u>246</u>
MOTHERS—							
Pregnancy						19	4
Nursing Mothers						—	—
						<u>19</u>	<u>4</u>

INFANT VISITATION.

Under the scheme of infant visitation every birth is visited if the notification does not state that a medical practitioner has been in attendance, and the following table shows the record of those visited, together with certain information obtained :—

					1935.	1936.	1937.
Inquiry cards returned ...					17,949	18,730	18,370
Full information obtained ...					17,460	18,251	17,997
Doctor found in attendance ...					5	9	5
Wrong address ...					—	—	—
Others ...					484	470	368
Inquiry cards issued ...					18,135	18,522	18,296

Of those for whom full information was obtained—

Legitimate ...					17,022	17,414	17,288
Illegitimate ...					623	651	646
Born at full term ...					<u>16,535</u>	<u>16,815</u>	<u>16,781</u>
Premature births ...					1,110	1,247	1,153

Condition of Infant at Birth—

				1935.	1936.	1937.
Well nourished	...	...	...	15,064	15,033	14,978
Fairly nourished	...	...	...	1,102	1,482	1,449
Badly nourished	...	...	...	682	715	723
Still-born	...	...	...	797	835	784

Nature of Feeding at First Visit—

Breast	...	...	...	...	13,858	13,691	13,593
Artificial	...	...	...	...	2,047	2,576	2,495
Breast and Artificial	...	...	...	...	362	432	527
Still-born	...	...	...	...	797	835	784
Dead at First Visit	...	...	...	...	581	530	534
Adopted	...	...	...	...	—	1	1

VISITATION BY NURSES.

Altogether the nurses made 121,665 home visits during the year, 59,136 of which were in respect of infants under 1 year of age. 18,837 of these were first visits. In addition, 27,699 were made to houses in respect to toddlers, while 8,196 other toddlers were seen during the course of routine visitation of infants. The other visits were for special enquiries, as shown in the following table :—

VISITS MADE BY NURSES.

		1937.	1936.
Infants under 1 year—Primary Visits	...	18,837	19,326
Infants under 1 year—Subsequent Visits		40,299	35,097
		59,136	54,423
Children 1-5 years	...	27,699	24,161
Children seen while visiting infants	...	8,196	7,863
Ophthalmia Neonatorum	...	6,092	5,841
Puerperal Fever	...	1,384	1,296
Maternal Deaths enquiries	...	315	307
Infant Deaths	...	2,038	1,937
Ante-natal Visits	...	4,939	4,547
Venereal Diseases	...	280	253
Light Treatment	...	1,163	1,074
Pneumonia	...	70	3,574
Other Visits	...	1,172	1,250
Houses Shut	...	17,377	15,968
		121,665	114,631

Infants or Children brought to Central Clinic for treatment, etc.—

Child Welfare	...	650	396
Venereal Diseases	...	97	64
Others	...	391	179
		1,138	639

In addition to home visitation, the nurses attend the Child Welfare and other consultations in their own districts. They thus have an opportunity of reporting to the doctor any illness or condition requiring medical treatment and following up cases afterwards to see that the treatment recommended is carried out.

CLINIC SESSIONS ATTENDED BY NURSES.

Ante-natal	...	...	...	...	...	...	...	3,853
Infant Consultations	...	...	...	...	...	...	...	4,636
Venereal Diseases	...	...	...	...	...	...	...	449
Light Treatment	...	...	...	...	...	...	...	643
								<hr/> 9,581 <hr/>

The children found alive on the occasion of the first visit by the Health Visitor are classified in the following table under three groups :—

			Well.	Fair.	Bad.	Total.
1935	...	...	15,047	1,289	124	16,460
1936	...	...	15,330	1,678	200	17,208
1937	...	...	15,163	1,500	214	16,877

The following table is a summary of results found at final visit :—

			Still Good.	Much Im- proved.	Slightly Im- proved.	No Im- pr'ment.	Worse.	Total.
1935	...	...	5,247	98	1	9	—	5,355
1936	...	...	5,004	143	—	2	—	5,149
1937	...	...	5,998	208	—	1	—	6,207

GLASGOW INFANT HEALTH VISITORS' ASSOCIATION.

Working in association with the Public Health Department is the Glasgow Infant Health Visitors' Association, to whom are reported children whom it is desirable to keep under observation during a longer period than is possible by the official visitors. The number of visitors fluctuates around 300.

As the period of visitation generally extends over the first twelve months of life, a complete year must elapse before the results of the visitation can be summarised.

The following is a summary of the results for the years 1934-1936 :—

Year.	Year old.	Re- moved.	Dead.	Ceased to be visited.	Visits Un- necessary.	No Infor- mation.	Visits Re- sented.	No Visitor.	Total.
1934	...	1,842	271	164	3	13	—	2	2,297
1935	...	1,636	207	121	4	5	—	1	1,975
1936	...	1,589	193	155	10	6	—	2	1,955

DOMESTIC HELPS.

Since the scheme for supplying Home Helps was inaugurated in Glasgow towards the end of 1924, there has been an increasing demand for their services. In the first year there were only 17 applications, while in 1937 the total was reached 212. The scale of payment is 5s. per day, which is guaranteed by the Corporation. Assistance of this kind for those who can pay this rate is arranged privately, and is not included in the records shown below. Quite a number are being placed in this way as the scheme becomes better known.

Payment for the services of helps is in accordance with a scheme of "necessitousness" based on the scale applicable to grants of milk and meals under the Child Welfare Scheme, with a minimum charge of 1s. per day. The following is a summary of the payments made for services rendered :—

				Cases. 1937.	Number of Days Attended. 1937.	Rate Per Day.	Amount Paid by Patients. 1937.
				88	1,326	1/-	£66 6 0
				—	—	1/3	—
				32	444	1/6	33 6 0
				33	401	2/-	40 2 0
				30	351	2/6	43 17 6
				19	206	3/-	30 18 0
				5	43	3/6	7 10 6
				5	41	4/-	8 4 0
				—	—	5/-	—
1937	...	...	...	<u>212</u>	<u>2,812</u>		<u>£230 4 0</u>
1926	...	...	...	107	1,407		£102 2 6
1927	...	...	...	118	1,361		105 8 6
1928	...	...	...	132	1,656½		129 11 6
1929	...	...	...	195	2,476		195 2 6
1930	...	...	...	204	2,460½		173 9 0
1931	...	...	...	261	3,331		233 13 6
1932	...	...	...	249	3,346		219 2 6
1933	...	...	...	257	3,082½		204 2 0
1934	...	...	...	240	2,837		200 15 0
1935	...	...	...	212	2,996½		223 14 9
1936	...	...	...	228	3,105		235 4 3

During 1937 individual helps attended 212 cases for a total of 2,812 days, or an average of 13 days per case. The amount paid in fees was £230 4s. The helps are remunerated at the rate of 5s. per day, so that the balance falling to be met by the Corporation was £472 16s.

MATERNITY BUNDLES.

In connection with the Child Welfare movement, a very definite need has been met by the issue of maternity bundles, and, in accordance with the practice of recent years, these are not issued until the birth actually takes place, as in necessitous cases to which they are issued, it was found that quite frequently the garments supplied were misused. In 1937, bundles or part bundles, to the number of 2,851, were supplied, compared with 1,755 in 1936 and 1,370 in 1935. Receipts from those who could make a part payment amounted to £53 2s. 1d., as against £55 12s. 6d. received from this source during the preceding year.

DAY NURSERIES.

Including the Phoenix Park Nursery School, there are four Centres with nursery accommodation. The total attendances of children at these Centres during 1937 was 26,260, in comparison with 23,777 during the previous year.

The following figures show the number of attendances, etc., at each Centre during the year :—

Nursery.			Number of Days open.	Total Attendances during the year	Average.	Maximum number in one day.	Accommo- dation for.
Bridgeton ...	...	...	242	8,900	37	47	40
Cowcaddens ...	...	...	251	7,375	29	36	36
Phoenix Park Kinder- garten ...	...	...	190	5,101	27	34	31
Kingston ...	...	...	225	4,884	22	30	30

Phoenix Park Nursery School.—The children's health has been good through the year, there has been little infectious trouble and those who did fall victim made good recoveries—others in urgent need of treatment for teeth and tonsils were persuaded to go to hospital and much benefit has ensued. There have been some interesting cases of big gains in weight in the year with corresponding gain in vitality on the part of the child, listlessness becoming changed to a keen activity of mind and body, coupled with a ready smile and sense of fun.

The Nursery School has its beneficial effect upon the mothers too, and one sees tired, anxious faces take on a new interest. Most helpful things are done by one mother for another or for the Nursery School, and friendships spring up irrespective of church and creed.

The outstanding external event of the year has been the commencement of the new Nursery School building, hailed with joy by mothers, children, and staff.

During the year there have been thirty students in the Nursery School, teachers taking the special short Nursery School Course at Jordanhill, Froebel students, and nurses.

One student was interested in discovering that such young children could have such a keen sense of humour, others were struck by the children's happy relationships with one another, by their good vocabularies, and their keen interest in all the activities of the day.

WINIFRED M. ANDERSON.

JUVENILE UNEMPLOYMENT CLASSES, Etc.

During the year 75 pupils from the School of Domestic Science received a course of training, compared with 71 for the preceding year.

COUNTRY HOMES.

The two Country Homes have between them about seventy beds for weakly or debilitated children. For some years past it has been customary during epidemic prevalence of children's diseases to select for admission those who had made imperfect recoveries. During recent epidemics of measles and whooping-cough, the Homes were devoted to children admitted direct from the infectious disease hospitals. In this way they act as adjuncts to the fever hospitals, providing convalescent accommodation for young children during an epidemic of measles, whooping-cough or pneumonia. This scheme has been of great benefit to the children, has assisted the accommodation in the hospitals in times of pressure, and has avoided the introduction of other infections into the Homes, as is apt to occur when young children are admitted direct from their homes in the City. Plans have been approved for the extension of both Country Homes on simple lines.

Mount Blow was closed for extension and repairs from October to December, 1937, inclusive.

The following analysis shows that 319 children were admitted under the Child Welfare Scheme to the two Country Homes during the year, the two principal reasons for admission being rickets and malnutrition :—

	Scotstoun.	Mount Blow.	Total.
Rickets	6	9	15
General Malnutrition and Debility	50	76	126
Bronchitis	7	1	8
Debility after acute illness	—	4	4
Anaemia	1	2	3
Nervousness	—	—	—
Others	—	—	—
Convalescent after Measles and Pneumonia	136	27	163
	<u>200</u>	<u>119</u>	<u>319</u>

The dismissals during the year were 197 from Scotstoun and 150 from Mount Blow. The condition on dismissal is summarised in the following statement :—

	Scotstoun.	Mount Blow.	Total.
Much improved	179	121	200
Not improved	—	—	—
Parents leaving City	—	—	—
Transferred suffering from infectious disease	10	10	20
Taken home by parents (Fretting, etc.) ...	1	12	13
Died	2	—	2
For admission to other Institutions	5	4	9
Sent home (Cough, Fretting)	—	3	3
Contacts with cases of Infectious Disease sent home	—	—	—
	<u>197</u>	<u>150</u>	<u>247</u>

MIDWIVES AND MATERNITY HOMES (SCOTLAND) ACT, 1927.

Five applications for registration of Maternity Homes were made during the year, all of which were granted. Two of these were new applications, while the other three were for new certificates of registration consequent upon a change of address of the home having been made.

Eight certificates of registration were withdrawn. These included the three cases mentioned above where a change of address had been made, and the other five cases were where the premises had been given up entirely or intimation was made by the responsible persons that they intended to discontinue maternity work.

No fresh applications for exemption were received, and renewal of exemption was granted to the institutions previously on the exemption list.

The following is the number of maternity homes on the register at 31st December, 1937 :—

	Registered.	Exempted.
Maternity Hospitals	2	—
General Infirmarys and Hospitals	1	5
Nursing and Maternity Homes	41	3
	<u>44</u>	<u>8</u>

MIDWIVES (SCOTLAND) ACTS, &c., 1915-27.

During 1937 there was an increase of 8 in the number of midwives who notified their intention to practice, so that there are now on the register 233, compared with 225 at the end of 1936. The number of those entitled to registration by examination is 186, while those registered as having been in practice in 1914 numbered 47, or 7 less than at the end of the preceding year. Of those who ceased practice, 1 died. The number who notified their intention to practice for the first time was 19.

There was a decrease of 204 in the total number of live and still-births notified during the year. Those occurring in the practice of midwives were also fewer by 204, compared with a decrease of 95 which took place in the preceding year. The number of births attended by outdoor maternity nurses, etc., was lower in this instance by 187, but there was an increase of 22 in the births attended by doctors at home, compared with an increase of 167 in the medically attended births in institutions.

The following table summarises the numbers for the year, with relative figures for the two preceding years :—

	1935.	1936.	1937.
Midwives in Practice during year	228	225	233
THE QUALIFICATIONS FOR CERTIFICATION UNDER ACT, HELD BY THE FOREGOING WERE—			
In Practice, December, 1914	57	54	47
C.M.B. (Scotland) Examination	137	136	169
Other recognised qualifications	34	35	17

In the following table some indication is afforded of the number of births attended during the year by individual midwives. It would seem that of the 6,446 births attended by midwives, 4,528 occurred in the practice of midwives with 50 confinements or more in the year :—

BIRTHS NOTIFIED BY MIDWIVES.

	1935.		1936.		1937.	
	Births.	Mid-wives.	Births.	Mid-wives.	Births.	Mid-wives.
Under 50 Notifications	1,804	125	2,105	130	1,918	121
50-99 ,,	2,309	34	2,586	37	2,219	32
100-199 ,,	2,341	17	1,707	12	2,029	16
200-300 ,,	294	1	252	1	280	1
	<u>6,748</u>	<u>177</u>	<u>6,650</u>	<u>150</u>	<u>6,446</u>	<u>170</u>

STILL-BIRTHS NOTIFIED BY MIDWIVES.

				Midwives.			Still-Births notified.		
				1935.	1936.	1937.	1935.	1936.	1937.
1-5 Notifications	...	...	...	72	78	70	146	150	133
6-7	„	...	...	3	2	3	20	18	20
11	„	...	...	—	—	—	—	—	—
				75	80	73	166	168	153
Percentage of Births attended				...	...	...	2.2	2.4	2.5
1934				...	...	In 42 cases,	Doctors assisted.		
1935				...	...	In 56	„	„	
1936				...	...	In 49	„	„	
1937				...	...	In 53	„	„	

The figures in the two following summaries contain records of ophthalmia occurring in the practice of midwives, so that the numbers are not the same as the actual cases referred to in other sections of this Report.

CASES OF OPHTHALMIA NEONATORUM OCCURRING IN PRACTICE OF MIDWIVES.

				Midwives.			Cases notified.		
Notifications				1935.	1936.	1937.	1935.	1936.	1937.
1-5	...	...	...	63	66	67	141	138	146
6-10	...	...	...	9	10	12	65	81	92
11-15	...	...	...	7	3	4	83	38	51
16-20	...	...	...	2	1	2	36	17	38
21-25	...	...	...	1	2	1	25	49	30
Over 25	...	...	...	—	—	—	—	—	—
				82	82	86	350	323	357
Percentage of Births attended				...	...	...	5.2	4.9	5.5

CASES OF PUERPERAL FEVER OCCURRING IN PRACTICE OF MIDWIVES.

				Midwives.			Cases.		
				1935.	1936.	1937.	1935.	1936.	1937.
1 Case	...	...	...	29	37	41	29	37	41
2 Cases	...	...	...	12	11	11	24	22	22
3 „	...	...	...	3	5	4	9	15	12
4 „	...	...	...	—	1	4	—	4	16
5 „	...	...	...	1	2	—	5	10	—
6 „	...	...	...	1	—	—	6	—	—
7 „	...	...	...	1	—	—	7	—	—
8 „	...	...	...	—	—	—	—	—	—
				47	56	60	80	88	91

NUMBER OF REQUESTS FOR ASSISTANCE TO MEDICAL PRACTITIONERS
IN CASES OF EMERGENCY UNDER RULE.

Notifications					Midwives.			Requests made.		
					1935.	1936.	1937.	1935.	1936.	1937.
1-9	...	...	...	...	80	67	72	315	283	305
10-20	...	...	...	...	34	36	30	463	511	417
21-30	...	...	...	...	17	20	16	393	461	394
31-40	...	...	...	...	9	7	7	300	238	247
41-50	...	...	...	...	6	5	6	277	216	281
Over 50	...	...	...	...	7	8	8	494	569	544
					<u>153</u>	<u>143</u>	<u>139</u>	<u>2,242</u>	<u>2,278</u>	<u>2,188</u>

During the year there were 2,188 occasions on which medical help was called by midwives, which represents 34 per cent. of the total births occurring in the practice of midwives, and compares with 34 per cent. in 1936, and 33 per cent. in 1935. Details of the nature of emergency are not given this year, but the following indicates the period during which medical assistance was called :—

NATURE OF EMERGENCY.

	1935.	1936.	1937.
In all cases in which a woman during pregnancy, labour, or lying-in appears to be dying or is dead ...	—	—	—
PREGNANCY.—In cases of a pregnant woman, where there is any abnormality or complication ...	72	70	66
LABOUR.—In the case of a woman in labour at or near term, when there is any abnormality or complication ...	1,681	1,721	1,663
LYING-IN.—In the case of a lying-in woman, when there is any abnormality or complication ...	216	216	203
THE CHILD.—In the child, when there is any abnormality or complication ...	263	260	250
Cannot be classified ...	10	11	6
Total ...	<u>2,242</u>	<u>2,278</u>	<u>2,188</u>

DEATHS (NOTIFIED BY MIDWIVES) BEFORE A DOCTOR WAS IN ATTENDANCE ...	—	12 infants.
LAYING OUT THE DEAD ...	1 mother.	5 infants.
ARTIFICIAL FEEDING ...	46 notifications.	

INTIMATION OF EXPOSURE TO INFECTION.

DISEASE.						1935.	1936.	1937.
Puerperal Fever	...	...	...	...	...	57	49	38
Pyrexia	...	...	...	...	...	25	30	43
Measles	...	...	...	...	...	1	8	2
Scarlet Fever	...	...	...	...	...	4	3	7
Diphtheria	...	...	...	...	...	4	1	1
Pneumonia	...	...	...	...	...	6	4	2
Erysipelas	...	...	...	...	...	1	2	2
Whooping-Cough	...	...	...	...	...	—	1	—
Pemphigus	...	...	...	...	...	9	1	4
Others	...	...	...	...	...	8	4	1
Chickenpox	...	...	...	...	...	—	—	2
Influenza	...	...	...	...	...	—	—	1
Ophthalmia	...	...	...	...	...	—	—	1
Venereal	...	...	...	...	...	—	—	2
•						115	103	106

Fees to Doctors in Emergency Cases.—In the following table the total amount of accounts for the year ending November is shown, that being the period at which doctors' accounts are made up :—

Years ended November, 1922-25 (Average)	...	...	£1,629	0	6
„ 1926-30 „	...	...	1,690	14	6
„ 1934 ... ..	...	...	1,641	5	0
„ 1935 ... ..	...	...	1,854	5	0
„ 1936 ... ..	...	...	1,811	0	6
„ 1937 ... ..	...	...	1,655	6	0

The practice of issuing accounts with the object of recovering some part of the fee, which was begun as from June, 1922, has been continued, and during the past year £267 0s. 8d. has been so recovered, while £3 18s. was withdrawn from medical practitioners' accounts, and accounts for £1 1s. were deleted.

SCHEME FOR THE PAYMENT OF MIDWIVES FEES IN NECESSITOUS CASES.

Under the scheme for the payment of midwives described in the report for last year, 748 applications were received by the Department during 1937. These were dealt with as follows :—

REFUSED—							1937.
In receipt of maternity benefit	...	...	...	...	...	...	119
Not in accordance with scheme (late)	...	...	...	...	...	...	66
Medical grounds	...	...	...	...	...	...	20
Unsatisfactory home conditions	...	...	...	...	...	...	15
Income over scale	...	...	...	...	...	...	6
							<hr/> 226
GRANTED—							
Confinements completed at home	...	...	...	...	...	...	463
Transferred to hospital after onset of labour	...	...	...	...	...	...	9
Admitted to hospital at own request	...	...	...	...	...	...	12
Withdrawn	...	...	...	...	...	...	38
							<hr/> 522
							<hr/> 748

Fees were paid to midwives as follows :—

Confinements completed at home—463 at 25s.	...	...	£578	15	0
Cases transferred to hospital after onset of labour—9 at 10s.	...	...	4	10	0
			<hr/> £583	5	0

In practically all of the 472 cases dealt with at home or in hospital the family income was under the scale minimum, a proportion of the fee paid to the midwife being recoverable in only 31 cases, as follows :—

HOME CASES—

12 at 20 per cent.	...	...	...	...	...	£3	0	0
12 at 40 per cent.	...	...	...	...	...	6	0	0
4 at 60 per cent.	...	...	...	...	...	3	0	0
3 at 80 per cent.	...	...	...	...	...	3	0	0
making a total amount recoverable of only						<hr/> £15	0	0

Including cases completed at home, or transferred to hospital after onset of labour, the 472 cases for which payment of fees was made by the Department were distributed among midwives as follows :—

No. of Midwives.	No. of Cases each.	Total Cases.
26	1	26
14	2	28
12	3	36
7	4	28
8	5	40
14	6-10	106
9	11-20	115
3	20+	93
<hr/> 93		<hr/> 472
<hr/> 1936 ... 91		<hr/> 458

OPHTHALMIA NEONATORUM.

During the year 796 cases of ophthalmia neonatorum were notified, compared with 706 in 1936. Analysis of these notifications indicates that the greater number of the cases are reported by institution nurses and midwives.

CASES OF OPHTHALMIA NEONATORUM ACCORDING TO
NATURE OF ATTENDANCE AT BIRTH.

Doctors	...	...	...	...	...	...	15
Institutions	...	...	...	...	...	...	112
Institution Nurses	...	...	...	...	...	...	312
Midwives	...	...	...	...	...	...	357
							<u>796</u>

An analysis has been made, both clinical and bacteriological, of all cases notified. The following is the clinical analysis of the 796 notifications:—Ophthalmia, 238; purulent conjunctivitis, 132; simple blepharitis, 2; conjunctivitis, 335; dacrocystitis, 4; styte, 4; normal, 81. The period after birth within which the first signs of inflammation appeared is given as follows for the whole series, *i.e.*, within 12 hours, 49 cases; between 12 hours and 4 days, 199 cases; between 4 days and 8 days, 246; and over 8 days, 221 cases. This period is important as regards gonococcal infection, as it indicates the probable source of infection. Thus of the total cases, 23 in number, due to this cause, in 10 of the first signs appeared between 12 hours and 4 days after the birth of the child, in 8 between 4 and 8 days, and 5 later than 8 days.

Routine examination for the causative organisms was made in every case reported showing signs of catarrhal inflammation. The results are given in the following table which has been prepared in accordance with the reports and advice of the City Bacteriologist, who has undertaken the examination and classification of the specimens:—

	Ophthalmia.	Purulent Conjuncti- vitis.	Simple Conjuncti- vitis.	Normal.
Gonococcus	23	—	—	—
Staphylococcus	29	9	17	1
Diphtheriod	36	18	55	4
Gram-positive Diplococcus ...	56	52	109	—
Gram-positive Bacillus and Diplo- coccus	—	—	1	2
Gram-positive Bacillus	15	8	38	—
Koch-Weeks Bacillus	19	7	5	—
Gram-negative Bacillus (resembling Coliform Bacillus)	—	—	—	—
Streptococcus	4	4	2	—
Morax-Axenfeld Bacillus	2	1	1	—
Pneumococcus	3	1	—	—
Gram-negative Diplococcus Group	—	—	—	1
No Organism	51	32	107	73
	<u>238</u>	<u>132</u>	<u>335</u>	<u>81</u>

Dacrocystitis—	Gram-positive Diplococcus	...	...	1
	Gram-positive Bacillus	...	...	1
	Gram-negative Bacillus (resembling coli-form)	...	...	1
	Staphylococcus	...	...	1
Stye	—Gram-positive Bacillus	...	...	1
	Gram-positive Diplococcus	...	...	1
	Staphylococcus	...	...	2
Blepharitis	—Gram-positive Bacillus	...	...	1
	Staphylococcus	...	...	1

The number of cases of gonococcal ophthalmia neonatorum is 23. It is gratifying that this is the lowest number yet recorded. Of the total cases, 47 were removed to hospital; 40 attended hospital for outdoor treatment and made 220 attendances; the others were treated at home or at the child welfare centres by the nurses who made 6,092 visits in this respect.

Analysis of Indoor Cases.—The number of admissions was 66, including cases occurring outwith Glasgow; 1 case was re-admitted after dismissal. Bacteriological examination of the 66 cases showed the following result:—Gonococcus, 22; diphtheriod bacillus, 5; staphylococcus, 6; gram-positive diplococcus, 11; gram-positive bacillus, 3; Koch-Weeks bacillus, 5; streptococcus, 2; gram-negative bacillus (resembling coliform), 1; no organism, 11.

The Wassermann test for syphilis was performed in the 66 cases, and in no case was the test positive, and in none of the children was there any evidence of a syphilitic infection.

Results of Treatment.—The results in the gonococcal group of cases were satisfactory. Of the 23 cases occurring in the City, all except 1 recovered with no corneal defect. In this case there was corneal scarring in one eye with some impairment of vision.

PUERPERAL FEVER AND PUERPERAL PYREXIA.

Puerperal Fever.—The relative figures showing cases, deaths, and rates for the past 10 years are tabulated below for comparison:—

	Cases.	Deaths.	Case Mortality per cent.	Cases per 1,000 Births.	Deaths per 1,000 Births.
1928	413	89	21·5	17·5	3·8
1929	516	86	16·7	22·6	3·8
1930	598	86	14·4	25·6	3·7
1931	663	71	10·7	28·9	3·1
1932	710	83	11·7	31·2	3·7
1933	543	68	12·5	25·4	3·1
1934	619	67	10·8	28·3	3·0
1935	589	81	13·7	38·0	3·6
1936	500	57	7·9	22·4	2·5
1937	535	50	5·8	24·1	2·2

The cases of puerperal fever show an increase to 535, as compared with 500 confirmed last year, while the deaths have fallen to a lower level than any recorded for the City since 1913 and 1919. The case mortality rate of 5·8 per cent. is one-quarter of what it was 10 years ago, and less than one-half of the rate in 1935. The death-rate per 1,000 births (2·2) is the lowest recorded rate since 1921. It may be that the virulence of the puerperal streptococci is less, but credit must be given to the new drug (Sulphanilamide), which has been in general use for treatment during the last year.

Notifications.—The puerperal fevers and pyrexias combined totalled 928, an increase of 105 on 1936. Of these, 864 were confirmed; 36 of the remaining 64 were abortion cases, showing a tendency towards early notification, when hospital treatment can be of some value. Of 535 confirmed cases of puerperal fever, 414 were notified as such, whereas, of 514 notified as puerperal pyrexia, 329, or 64 per cent., proved to be true sepsis. In other words, two-thirds of the cases of notified puerperal pyrexia are, in fact, cases of puerperal fever.

Admissions to Hospitals.—Of the 535 confirmed cases of puerperal fever, 393 (73 per cent.) were treated in Corporation Isolation Hospitals, 85 in Local Authority General Hospitals, 36 in other Maternity Hospitals, leaving only 21, or 3·9 per cent., at home. The hospitalisation of this fever to the extent of 96 per cent. is thus very complete.

As regards puerperal pyrexia, of the 329 verified cases, 98 were admitted to Fever Hospitals, 51 to Public Health General Hospitals, while 114 were treated in other Maternity Institutions, leaving 66, or 20 per cent., to be looked after at home. This indicates the very full use of hospitals, which appears to be increasing, even for cases of febrile upsets in the puerperium.

Distribution in Time.—Monthly incidence of puerperal fever, puerperal pyrexia, scarlet fever, and erysipelas :—

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Puerperal Fever ...	44	45	48	43	39	31	48	44	40	64	39	50	535
Puerperal Pyrexia ...	37	23	23	42	33	22	20	28	30	26	22	23	329
Scarlet Fever ...	392	434	452	458	526	508	374	368	431	560	636	462	5,601
Erysipelas ...	88	72	103	78	62	69	64	71	82	108	115	126	1,038

The monthly incidence of puerperal fever has an average around 40; the maximum being 64 in October and the minimum 31 in June. Puerperal pyrexia was lowest in July with 20, and highest in April with 42. There is no positive correlation between this incidence and that of scarlet fever and erysipelas.

Distribution in City Wards.—The highest incidence of cases was in Wards Gorbals, Parkhead, Shettleston and Tollcross, Dalmarnock, and Ruchill, in contrast with Langside, Kelvinside, Cathcart, and Camphill. The case-rate shows Parkhead with a rate of 29 per 1,000 births, Gorbals with 25, Dalmarnock and Calton with 23, and Blythswood and Cowcaddens with 22 per 2,000 births, Cathcart, Kelvinside, and Pollokshaws with a case-rate of 5; these rates vary from year to year in the City wards.

The deaths were highest in Dalmarnock, numbering 5; Provan 4 while Shettleston and Tollcross, Park, Maryhill, and Kingston registered 3 each. No deaths took place in Mile-End, Anderston, Cowcaddens, Ruchill, Partick (East), Gorbals, Kinning Park, Fairfield, Camphill, Pollokshaws and Govanhill, or in Yoker and Knightswood. Park Ward showed the highest death-rate of the City with 11 per 1,000 births.

Abortions.—Abortions followed by fever, numbering 154 with 23 deaths, still contribute one-seventh of the total cases and deaths from fever. Of 95 abortions with no medical assistance called in at the beginning until sepsis was definite, 12 died subsequently.

Puerperal Pyrexia.—Puerperal pyrexias notified were 514, and confirmed as due to infection 329, showing a case-rate of 14 per 1,000 births, which is an increase on last year. Pneumonias contributed 34, with 19 deaths, and phthisis 10, with 4 deaths from respiratory affections. There were 103 cases of inflammation of the breast, of which 81 were definite cases of mastitis. Accidents of childbirth (63), from damage at birth, are still a common cause of reactionary fever.

Nursing Services.—2,350 visits were paid by the District Nursing Association to 87 patients. Of these, 39 patients suffered from acute mastitis, which developed in the early puerperium, and required 2,106 visits. Requests were:—79 from General Practitioners, and 8 from Maternity Hospitals.

Consultant Services.—Consultants were required by general practitioner on 26 occasions, 16 in respect of puerperal fever, and 9 in respect of puerperal pyrexia. 15 of these patients were removed to hospital.

Bacteriological Services.—During the year the services of the City Bacteriologist were sought for 57 specimens, 22 by the Health Department, 31 by Medical Practitioners, and 4 by Outside Authorities.

SECTION IV.

INFECTIOUS DISEASES.

The number of cases of the various infectious diseases registered during 1937, and the number treated in Local Authority hospitals and other institutions, are given in the Appendix Table XVII.; the seasonal prevalence of each is shown in Table XIX., which gives the numbers registered during each month of the year.

For purposes of comparison, the rates for each disease per million of the population, along with the rates for the preceding four years, are given in Table XVIII. of the Appendix. The rates for the principal diseases which have been notifiable over a considerable period are summarised in the following table from 1914 onwards:—

GLASGOW. — CASE-RATE PER MILLION OF THE POPULATION FOR ALL CASES OF INFECTIOUS DISEASES REGISTERED SINCE 1914.

YEAR.	Typhus Fever.	Enteric Fever.	Continued and Undefined.	Puerperal.	Smallpox.	Scarlet Fever.	Diphtheria and Membranous Group.	Cerebro-spinal Fever.	Phthisis.	Non-Pulmonary Tuberculosis.	All Other Diseases.	TOTAL.
1914 ...	18	340	7	206	—	5,337	1,440	45	2,284	1,088*	21,675	32,440
1915 ...	9	248	5	175	—	5,973	1,257	167	2,169	1,375	25,389	36,667
1916 ...	17	158	8	178	—	3,719	1,220	131	2,285	1,270	17,001	25,987
1917 ...	1	82	4	148	—	1,634	1,146	75	2,435	1,433	27,005	33,963
1918 ...	49	128	12	151	1	1,193	1,379	67	2,258	1,273	16,045	22,556
1919 ...	30	103	8	163	5	2,443	1,626	72	1,834	1,083	21,359	28,726
1920 ...	8	204	13	267	477	3,378	1,809	76	2,009	1,063	25,509	34,813
1921 ...	6	100	7	299	19	3,272	1,727	56	1,902	1,061	23,965	32,414
1922 ...	18	79	6	274	—	3,234	1,572	62	1,818	977	31,633	39,674
1923 ...	2	117	20	259	—	3,321	1,645	59	1,606	1,149	25,805	33,984
1924 ...	—	76	18	222	2	2,965	1,768	61	1,703	1,137	30,881	38,835
1925 ...	—	41	8	279	—	3,551	1,617	58	1,490	1,039	22,309	30,430
1926 ...	†	92	4	283	—	4,350	2,130	60	1,646	945	31,865	41,385
1927 ...	—	136	4	254	—	3,777	2,785	72	1,489	1,010	32,021	41,550
1928 ...	—	53	4	379	—	2,971	2,414	94	1,582	1,016	29,368	37,880
1929 ...	—	78	4	474	20	3,079	1,944	186	1,656	911	28,838	37,192
1930 ...	2	129	4	549	3	4,555	2,407	136	1,549	962	32,002	42,298
1931 ...	1	102	3	609	—	6,449	1,937	167	1,564	897	36,642	48,671
1932 ...	—	69	1	649	—	8,361	1,966	138	1,572	874	25,745	39,375
1933 ...	—	122	2	492	—	7,593	2,148	140	1,465	720	21,572	34,254
1934 ...	—	39	2	555	—	5,336	2,374	85	1,475	609	40,750	51,225
1935 ...	—	164	4	526	—	3,605	2,207	74	1,569	602	20,817	29,568
1936 ...	—	195	2	447	—	3,845	1,749	66	1,471	635	36,838	36,838
1937 ...	—	63	4	478	—	5,001	2,081	94	1,477	573	23,567	33,338

* Non-pulmonary tuberculosis made compulsorily notifiable, July, 1914.

† Rates are for extended city.

The preceding table, which is based on crude incidence rates, gives a general indication of the behaviour of the principal notifiable infectious diseases for a period of nearly a quarter of a century. It shows the gradual diminution and apparent extinction of typhus fever and the absence of smallpox from the city for several years. The enteric group of diseases are still endemic but of low incidence; its variations from year to year are accounted for by outbreaks, one of which occurred in 1936. During the past year there were 63 cases but no definite outbreak.

The incidence of puerperal fever rose after 1930 due to better diagnosis. This incidence is now tending to fall. As regards scarlet fever, the table shows its wide variations and the fact that its incidence has not diminished throughout the years. In 1937 the case-rate was 5,001 as compared with 3,845 in the previous year. Diphtheria also fluctuates from year to year. The rate of 2,061 may be regarded as normal experience for the city. Cerebro-spinal fever, which was prevalent between 1929 and 1933, has since fallen, although the rate during 1937, *i.e.*, 94, is a little in excess. The pulmonary tuberculosis case-rate, 1,477, compares with 1,471 in 1936 and 1,569 in 1935. As regards non-pulmonary tuberculosis, the figure of 573 shows a further decline in incidence; the figure for 1936 was 635, for 1935 it was 602 and 609 for 1934.

The group "All Other Diseases" includes pneumonia, measles and whooping-cough, all of which will be referred to in subsequent paragraphs. The incidence of these diseases fluctuates widely from year to year, but the total figure, 23,567, is very considerably less than that of 36,838 for the preceding year.

DISEASES FORMERLY CALLED "PRINCIPAL ZYMOTIC DISEASES."

The death rates for several periods have been:—

1881-1890, 3.000	per 1,000 living.	1931, 1.394	per 1,000 living.
1891-1900, 3.282	"	1932, 0.960	"
1901-1905, 2.660	"	1933, 0.758	"
1906-1910, 2.450	"	1934, 1.094	"
1911-1915, 2.424	"	1935, 0.702	"
1916-1920, 1.607	"	1936, 0.923	"
1921-1925, 1.303	"	1937, 0.795	"
1926, 1.257	"		
*1927, 1.141	"		
1928, 1.232	"		
1929, 0.874	"		
1930, 0.984	"		

*Diarrhoea over 2 years excluded.

In this comparison only those infectious diseases that have been notifiable for most of the period given are included.

SMALLPOX AND VACCINATION.

No case of smallpox has occurred in the city since 1931 although a few contacts with cases occurring on board ships from abroad are reported from time to time.

The number of conscientious objections to vaccination has again increased, as shown in the table given below which brings the statistics in respect of vaccination up to the end of 1936. For the year, only 41.4 per cent. of the children born were successfully vaccinated, compared with 42.3 for the previous year. This percentage was 83 in 1906, the year prior to the passing of the Vaccination (Scotland) Act, 1907, which permitted exemption from vaccination on grounds on conscientious objection. The percentage of conscientious objectors has risen from under 1 to 42.1.

TABLE SHOWING RESULTS OF PRIMARY VACCINATION OF CHILDREN BORN DURING SEVERAL YEARS.

(From the Detailed Annual Reports of the Registrar-General.)

Year.	Successfully vaccinated. Per cent.	Insusceptible of vaccine disease. Per cent.	Died before vaccination. Per cent.	Conscientious objection to vaccination. Per cent.	Vaccination postponed. Per cent.	Unaccounted for. Per cent.
1906,	82.9	0.5	10.6	0.2	0.8	5.0
*	*	*	*	*	*	*
1914,	51.7	0.9	12.1	25.1	1.8	8.4
*	*	*	*	*	*	*
1934,	43.9	3.5	7.4	38.8	1.6	4.8
1935,	42.3	2.9	8.3	40.7	1.4	4.5
1936,	41.4	2.0	8.5	42.1	1.3	4.7

These percentages indicate that more than half the child population is unprotected against smallpox.

During 1937, cases reported by registrars as not having lodged certificates under the Act numbered 4,491, compared with 4,821 for the preceding year. The following abstract shows the results of action taken by the Assistant Vaccination Officer, compared with 1936.

	1937.	1936.
Cases vaccinated,	1,551	1,604
„ postponed,	1,628	1,900
„ not susceptible to vaccine disease, ...	103	128
„ died before vaccination,	24	38
„ not found,	879	814
„ written off by Department of Health, ...	304	334
„ pending a decision,	2	3

In addition to 415 visits made by the Vaccination Officer, 3,639 visits were paid by Assistant Sanitary Inspectors, making a total of 4,054, approximately 90 per cent. of the number of cases referred to the Department. Among the defaulters there were 80 conscientious objectors who had failed to claim exemption within the specified period. Forty-two of these lodged either successful vaccination or medical exemption certificates.

Thirty-eight cases were submitted to the Department of Health for Scotland for special consideration and 36 of these were disposed of on their instruction and two were returned recommending further negotiation.

The total number of children vaccinated at the clinics held at the child welfare centres in the various districts of the city was 2,220, compared with 2,198 in 1936. The following table shows the number of children vaccinated at these centres during the past three years:—

STATEMENT SHOWING NUMBER OF INFANTS VACCINATED AT THE CHILD WELFARE CONSULTATIONS DURING THE YEARS 1935-37.

Centre.	1935.	1936.	1937.
Public Health Office,	525	282	290
Maryhill,	151	134	153
Govan Town Hall,	126	92	89
Adelphi Street,	315	320	—
Partick,	59	84	55
Weir Street,	111	80	88
Bridgeton,	447	385	353
Shettleston,	289	296	297
Elder Park,	98	96	92
Springburn,	144	148	151
Richard Street,	123	132	141
Blawarthill,	52	46	57
Provan,	—	103	144
Gorbals,	—	—	310
	<u>2,440</u>	<u>2,198</u>	<u>2,220</u>

TYPHUS FEVER.

No case of this disease occurred during the year. There have been only three cases of typhus in the city since 1927.

ENTERIC INFECTIONS.

By Dr. E. Bloch.

The number of notified cases of enteric infection, the number verified and the casual organisms were as follows:—

Cases Notified.	Cases Verified.		
	B. Typhosus.	Paratyphosus B.	Total.
128	20	51	71

Typhoid cases thus remained few and paratyphoid cases showed a striking fall from the previous year when 195 were registered.

Seasonal Distribution according to Dates of Sickening.—The following table shows the monthly incidence according to dates of sickening of cases or dates of detection of carriers:—

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
B. Typhosus, ...	2	1	—	3	1	2	1	4	2	1	1	2	20
Para. B., ...	4	2	6	2	9	15	2	5	2	1	2	1	51
	15			32			16			8			71

Typhoid cases thus showed the usual peak in the third quarter; but paratyphoid infections were most frequent in the second quarter. The institutional cases included in the above figures were registered as follows: 1 typhoid and 4 paratyphoid in the first quarter, 2 typhoid and 10 paratyphoid in the second quarter and 4 paratyphoid in the third quarter.

Age and Sex Distribution.—The verified cases showed the following age and sex distribution:—

	-1	-5	-10	-15	-20	-25	-35	-45	-55	-65	65+	Total
B. Typhosus.												
Males, ...	—	1	2	—	1	2	2	1	4	—	1	14
Females, ...	—	—	—	—	—	1	—	2	2	1	—	6
Para. B.,												
Males, ...	2	—	—	2	4	4	3	—	—	1	—	16
Females, ...	—	1	2	3	6	2	8	3	5	3	2	35
	2	2	4	5	11	9	13	6	11	5	3	71

Focal Concentration.—The following table shows the focal concentration of the cases:—

	No. of Groups.	Cases in these Groups.	Ungrouped Cases.	Total Cases.
B. Typhosus, ...	3	7	13	20
Para. B., ...	7	22	29	51

The typhoid groups consisted of an institutional group of 2 and familial groups of 2 and 3 persons respectively. A fourth member was added to the last group early in 1938. The paratyphoid groups consisted of two institutional groups of 2, institutional groups of 3 and 9, two familial groups of 2 and a ship group of 2 cases.

Sources of Infection.—The following table shows that 50 cases were sporadic or untraced:—

	Ungrouped Cases Traced.	Group cases traced or attributed to First Case in Group.	Group Cases.		Total.
			Untraced (First Case in Group).	Ungrouped Cases Untraced.	
B. Typhosus,	—	5	2	13	20
Para. B.,	—	16	6	29	51

It will be noted that in one group of each infection the source of the first case was traced, that is, the derivation of the group was discovered. The traced typhoid group consisted of a female case and her aunt, carrier No. 30 below. The latter had been infected in the pilgrimage described in the Glasgow Report for 1935 but had been treated in Ireland during her original illness. The paratyphoid group regarded as traced was the institutional group of 9 persons which included a carrier, aged 62, who gave a history of having sickened of a vague illness in March, 1936, in the Stirlingshire village then the scene of a milk-borne outbreak reported as involving 13 cases. This woman had been supplied with milk from the incriminated farm.

Place of Infection.—Two typhoid cases were infected outside Glasgow—a harbour case in Spain and carrier No. 30 in France. Paratyphoid infections numbering 11 were contracted outside Glasgow. Three home cases were regarded as having been infected in Argyllshire, Dunbartonshire and Invernessshire respectively. A ship's butcher was infected in Canada and on the voyage home one of the sailors sickened. Institutional cases were derived from Ayrshire and Dunbartonshire and from two localities in each of the counties of Stirlingshire and Lanarkshire.

Institutional and Harbour Cases.—The only harbour case was the typhoid case mentioned above; the two ship cases of paratyphoid were registered from their Glasgow home addresses. A medical institutional case is defined as any person contracting enteric fever in a Glasgow hospital or admitted with enteric fever from

beyond the boundary to a Glasgow general hospital. Medical institutional cases of typhoid consisted of a nurse in a general hospital who was infected in May from an unknown source and a male medical case infected by her. Institutional paratyphoid cases numbered 18. Four persons were admitted to a Glasgow general hospital suffering from paratyphoid infections contracted in their homes outside Glasgow. These included a female carrier aged 63. An unsuspected carrier aged 47, admitted from beyond the boundary to a South-Western Division general hospital for cholecystostomy, infected another county patient and a Glasgow patient who later became a carrier, No. 31 below. The remaining 11 institutional cases of paratyphoid were registered from a large voluntary hospital in the Central Division. In March a woman admitted from the South-Western Division with paratyphoid infected a Perthshire patient suffering from sarcoma. On 3rd July a Glasgow youth and another from Dunbartonshire sickened of paratyphoid in a surgical ward to which they had been admitted on 10th and 16th June respectively. No definite connection could be established between this pair of cases and the June outbreak described in the following paragraph; but efforts to find a different source also failed.

Institutional Outbreak.—The unsuspected Stirlingshire carrier mentioned under "Source of Infection" above was admitted to a surgical ward in this institution on 20th May and a cholecystectomy was performed on that date. On 24th June it was discovered that her gall-bladder yielded a pure paratyphosus culture and her blood a positive Widal reaction although her urine and faeces were negative. Meanwhile a ward maid, 3 Glasgow patients and 2 county patients had been sent to fever hospital after sickening in the ward on the following dates: June 3, 5, 6 (2 cases), 9 and 19. The period of contact before sickening averaged 12.3 days and ranged from 8 to 16 days. The first case to sicken had simulated scarlet fever owing to a profuse eruption of rose spots. It was also discovered that another Glasgow patient who had been in the ward between May 14 and 29 had sickened at home on 5th June. A ninth case connected with this group was registered in Glasgow in September from a home address in the Central Division. This was a woman who had sickened on 21st August having been infected in Argyllshire by a relative aged 31. The latter had been a patient in the infected ward from 14th to 29th May and had sickened on 7th June. She had become a persistent convalescent intestinal carrier and had already infected 2 other persons in Argyllshire who

had sickened on 2nd and 9th August respectively. The dimensions of this institutional outbreak therefore almost equalled those of the original milk-borne outbreak in which the carrier responsible for the second outbreak is suspected of having been infected. Glasgow had previously been connected with the original outbreak because the first case detected had been a child admitted to a Glasgow nursing home as recorded in last year's Report.

Deaths.—Three men aged respectively 46, 49 and 50 died of typhoid infection. Death from bowel perforation was certified regarding the first of these before laboratory findings proved him to have been a case of enteric fever. Another man aged 36 died in fever hospital of syringomyelia after recovery from enteric fever. Three females aged respectively 25, 35 and 44 died of paratyphoid fever. The female paratyphoid carrier aged 63, mentioned above, also died in fever hospital but her death was attributed to cardiac disease. The following table shows the death-rate from enteric infections per 1,000 living since 1881:—

1881-1890,	0.230	1921-1930,	0.010
1891-1900,	0.215	1931-1935,	0.009
1901-1910,	0.127	1936,	0.012
1911-1920,	0.041	1937,	0.004

Chronic Carriers.—Of the 26 carriers listed as resident in Glasgow at the end of 1936 No. 5 has left the city and No. 17 died in June of cancer of the colon. Details regarding the 2 carriers detected during 1937 are as follows:—

No. 30, Eastern Division, Ward 7. Reference A.R., female, aged 57, B. typhosus, intestinal carrier. Sickened in August, 1935, detected as carrier in February, 1937; one secondary case at time of detection. Examinations following fever hospital treatment in 1937; urine neg. (7), faeces neg. (1), pos. (6).

No. 31, Central Division, Ward 24. Reference M. G., female, aged 72, para. B, intestinal and urinary carrier. Sickened in March, 1937, detected as carrier in May, 1937; no secondary cases. No examinations since dismissal from fever hospital.

There are thus 26 known carriers now resident in Glasgow as follows:—

Northern Division	... Nos. 8, 13, 18, 27, 28 and 29.
South-eastern Division	No. 14.
South-western Division	Nos. 6, 20, 21 and 25.
Eastern Division	... Nos. 3, 10, 12, 19, 26 and 30.
Central Division	... Nos. 4, 9, 11, 15, 16, 22, 23, 24 and 31.

During 1937 carrier No. 4 removed from ward 38 to ward 25 within the Central Division. Eleven carriers were examined during 1937 with the following results:—

	Urine.	Faeces.
No. 5	Neg.	Pos.
No. 12	Neg.	Pos.
No. 14	Neg.	Pos.
No. 17	—	Pos. (2)
No. 19	Neg. (2)	Pos. (2)
No. 20	Neg.	Pos.
No. 21	Neg. (2)	Pos. (1)
No. 25	Neg. (2)	Neg. (2)
No. 26	Neg. (5)	Pos. (1) Neg. (4)
No. 28	Neg. (2)	Neg. (2)
No. 30		As above.

Carriers in Hawkhead Mental Hospital.—At the end of 1936 there were 12 typhoid carriers; one of these has died. Three typhoid carriers were admitted during 1937 from other mental institutions and one of these died. There are therefore now 13 carriers in the institution. Three other persons out of 150 Widal-tested during the year gave positive reactions but could not be demonstrated to be carriers.

Examination of Contacts.—The following tables show the number of contacts examined, the number found positive and the manner in which the contacts were examined:—

	B. Typhosus.	Para. B.	Total.
No. of cases in connection with which no specimens from contacts were examined,	8	24	32
No. of cases in connection with which specimens from contacts were examined,	12	27	39
No. of persons regarded as contacts of the latter—			
+ 10 years,	97	194	291
— 10 years,	14	56	70
Total number of contacts, ...	111	250	361
No. of contacts examined by means of specimens—			
+ 10 years,	33	113	146
— 10 years,	4	14	18
Total number of contacts examined	37	127	164
No. of contacts found positive, ...	3	4	7
Total number of specimens submitted for examination from contacts—			
(1) of Urine,	40	130	170
(2) of Faeces,	40	134	174
(3) of Blood,	4	6	10
Total number of specimens ...	84	270	354

The 10 specimens of blood were obtained from 10 persons. The above figures include 29 specimens of urine, 33 of faeces and 5 of

blood examined outside the Department's laboratory, namely, in the laboratory of a voluntary general hospital.

MANNER OF EXAMINATION OF CONTACTS.

No. of specimens examined per contact (urine, faeces or blood),	1	2	3	4	5	6	Total Specimens. 354
No. of contacts from whom above number of specimens were obtained	9	140	3	7	2	3	Total Persons. 164

Contacts found Positive.—These are persons from whom positive specimens are obtained in the course of routine supervision of the focus of infection by the Department's staff. They do not include, for example, secondary cases notified independently of departmental supervision. The number of contacts found positive therefore does not necessarily exhaust the number of grouped cases. The term "missed primary case" is used for only one case in any one group, namely, for the positive contact who appears to have been the first case in the group to sicken. Contacts found positive during the year under review numbered 7. All were found positive on first examination of laboratory specimens. The following list gives details regarding the contacts found positive and regarding the cases with which they were connected:—

Typhoid Cases.	Positive Contacts.
Male, 10,	Male, 12, missed primary case. Female, 50, secondary case. Jan., 1938: female, 24, contact carrier.
Female, 37,	Female, 57, chronic carrier.
Paratyphoid Cases.	
Female, 15,	Female, 25, contact carrier.
Male, 29 (ship).	Male, 56, secondary case.
Female, 47 (institution), ...	Female, 42, secondary case.
Females, 16, 17, 17, 34, 36, 59, and 79 (institution), ...	Female, 62, chronic carrier.

SCARLET FEVER.

The total number of cases registered was 5,598, compared with 4,306 in 1936, and the number of deaths 29, or 0.5 per cent. of the total cases, compared with 0.7 per cent. last year. There were no local epidemics associated with milk supplies or schools and the weekly incidence followed a fairly steady course throughout the year.

TABLE A.

Total cases registered,	...	...	...	...	5,598
Hospital cases,	...	...	...	...	5,084
Home cases, ...	...	...	...	...	514
Deaths registered, ...	...	...	...	...	29

Age Groups and Sex.

	Hospital.		Home.		Total.
	Male.	Female.	Male.	Female.	
— 1 year,	12	12	2	4	30
— 2 years,	95	104	3	12	214
— 5 "	679	698	45	47	1,469
—10 "	963	1,109	104	119	2,295
—15 "	314	467	39	59	879
—20 "	117	157	10	10	301
—25 "	53	86	7	10	156
—35 "	46	87	6	11	150
—45 "	25	41	2	8	76
—55 "	4	10	3	2	19
—65 "	—	5	—	2	7
65+ "	—	—	1	1	2
	2,308	2,776	222	292	5,598

Table A shows the age groups and sex distribution of the cases with the usual preponderance of cases occurring among school children.

The number of cases treated in hospital was 5,084, while 514 cases were treated at home. There were 327 secondary cases, or 6.4 per cent., infected from cases removed to hospital, which is similar to last year, and 32 secondary cases, or 6.2 per cent., associated with those nursed at home, compared with 7.7 per cent. last year. As many cases as possible are nursed at home, but the large majority of cases occur in houses where satisfactory isolation is not possible.

TABLE B.

Days' Residence of Scarlet Fever Cases (Glasgow Cases only)
Dismissed and Died during 1937.

Hospital.	—28 Days.		—35 Days.		—42 Days.		+42 Days...		Total Cases.	
	Dis- missed.	Died.	Dis- missed.	Died.	Dis- missed.	Died.	Dis- missed.	Died.	Dis- missed.	Died.
Belvidere, ...	574	10	749	1	247	1	448	2	2,018	14
Ruchill, ...	733	12	570	—	199	—	387	—	1,889	12
Shieldhall, ...	276	1	88	—	48	—	90	2	502	3
Knightswood, ...	40	4	280	—	88	1	151	1	559	6
Lightburn, ...	—	—	4	—	7	—	7	—	18	—
Darnley, ...	—	—	1	—	—	—	—	—	1	—
Blawarthill, ...	—	—	7	—	3	—	12	—	22	—
	1,623	27	1,699	1	592	2	1,095	5	5,009	35

The days of residence of cases in the various fever hospitals are shown in Table B, and Table C gives an analysis of the return cases associated with patients dismissed from the various hospitals.

Hospital Return Cases.—The total number of hospital return cases was 144, or 2.9 per cent. of the dismissed cases compared with 3.2 per cent. return cases last year.

TABLE C.

Day's Residence in Hospital.	Cases Dismissed within this Period.	Return Cases Associated.	Percentage of Total Dismissals.
—28 days,	1,623	52	3.2
—35 „	1,699	43	2.5
—42 „	592	25	4.2
+42 „	1,095	24	2.1

The death rate per thousand of the population from scarlet fever since 1881 is shown in the following table:—

1881-1890, ...	0.490	per 1,000	1929, ...	...	0.037	per 1,000
1891-1900, ...	0.295	„	1930, ...	...	0.038	„
1901-1910, ...	0.116	„	1931, ...	...	0.068	„
1911-1915, ...	0.163	„	1932, ...	...	0.093	„
1916-1920, ...	0.060	„	1933, ...	...	0.075	„
1921-1925, ...	0.065	„	1934, ...	...	0.069	„
1926, ...	0.083	„	1935, ...	...	0.033	„
1927, ...	0.040	„	1936, ...	...	0.029	„
1928, ...	0.031	„	1937, ...	...	0.026	„

DIPHtheria.

There occurred 2,330 cases of diphtheria during the year under review; this number represents a case rate of 2,081 per million. Compared with the previous year, the number of cases was greater by 372, but the year 1936 gave the lowest return over a period of 12 years. Indeed, an examination of the rates for diphtheria since 1920 shows that a rate of 2,081 cases per million may be regarded as a normal expectation for the city.

The incidence varies in the different wards of the city but is not always coincident with the density of the population. This may be partly explained by the difference in age constitution, for some of the wards have a large proportion of children of susceptible ages while in others the closely built-up area may be concentrated in one part of the ward, as is the case in some of the wards on the periphery of the city.

Of the 38 wards, 14 showed a definitely higher incidence, two showed a slightly increased incidence, three a slightly diminished incidence, and 19 showed a marked diminution when compared with the rate for the city as a whole. The highest return was for the ward Partick West with a rate of 3,825 cases per million and a density rate of 64 persons per acre. Partick East had a case rate of 3,588 per million and a density of 102 persons per acre. Woodside

Ward was the most densely populated ward of the city, having 188 persons per acre, but the case rate for diphtheria was only 2,085 per million—practically that of the city. Kelvinside and Langside Wards gave the lowest returns for diphtheria, 588 and 737 cases per million; their densities are low, being 23 and 34 persons per acre.

The year 1937 again showed that the age period 2-10 years is that of greatest susceptibility. The percentage of cases at the various ages is as follows:—

—1 year.	—2 years.	—5 years.	—10 years.	—15 years.	—20 years.	20+ years.
1.2	3.6	20.0	35.4	16.4	8.8	14.6

The above results may be classified in the following way. Of all the cases, 24.8 per cent. occurred in children of pre-school age, 35.4 per cent. in children attending the infant and junior schools, 16.5 per cent. in children attending the senior school, and 23.4 per cent. in persons of post-school age.

This disease in Glasgow during the year attacked females more frequently than males, the actual numbers being 1,293 females as against 1,037 males. In the pre-school age group the males showed a slight increase in numbers, but from five years onwards the females appeared to be increasingly more susceptible until in the age group 15+ years the females numbered more than twice the males (391 females and 154 males).

Diphtheria is regarded as a serious major infectious disease, and removal to hospital is encouraged. Only 39 cases (1.7 per cent.) were treated at home. Just as the rate of 2,081 cases per million may be considered a normal rate for the city, so a rate of 104 deaths per million may also be regarded as a normal rate. Actually there were 116 deaths, more than double the number in the year 1936; the male deaths numbered 59 and the female deaths 57. Three of the female deaths took place while the patients were under treatment at home; the mortality rate for hospital cases was 4.9 per cent.

The following table shows the distribution of cases, deaths, and mortality rates in the several age groups. There are also included for comparison the case mortalities for the year 1936:—

Age.	—1 year	—5 years.	—10 years.	—15 years.	15+ years.	Total.
Number of Cases,	27	551	824	383	545	2,330
Number of Deaths,	4	47	40	15	10	116
Case Mortality per Cent., ...	14.8	8.5	4.8	3.9	1.8	4.9
Case Mortality per cent., (1936),	3.6	4.4	3.5	1.2	0.7	2.7

Within recent years there has been a tendency for deaths at ages 5-10 years to exceed those at pre-school age, but the year 1937 has demonstrated that the old order has reasserted itself.

Unfortunately cases are still admitted to hospital in the late stages of the disease, and this delay is in great measure due to the fact that parents fail to realise their child is really ill and consequently neglect to call in medical advice until the malady is well established. Again, of the 113 deaths, 28 were bacteriologically examined and their swabs returned as positive prior to their admission to hospital. The following table deals with the 113 cases who died in hospital, and shows the period of time elapsing between the date of sickening and the date of removal to hospital as well as the duration in hospital before the fatal termination. Seventy-four of the total deaths died within one week of admission and the remaining 39 deaths took place after a residence in hospital varying from one to six weeks.

Analysis of 113 Deaths from Diphtheria in Hospital.

Admitted to Hospital.		Died in Hospital : Days after Admission.		A.	B.	C.	D.	E.	F.	G.	H.	Total.
Same Day as Sickened,		Same day as Admission		—	4	2	—	1	—	—	—	7
1 Day after	„	1 day after	„	1	4	5	7	5	1	1	2	26
2 Days after	„	2 Days after	„	—	4	—	2	1	1	1	—	9
3 „ „	„	3 „ „	„	1	1	2	3	1	2	—	—	10
4 „ „	„	4 „ „	„	—	1	1	3	—	—	—	—	5
5 „ „	„	5 „ „	„	—	1	2	2	1	—	—	1	7
6 „ „	„	6 „ „	„	—	2	2	2	3	—	—	1	10
7+ „ „	„	7+ „ „	„	1	4	11	2	2	—	1	5	26
		14+ „ „	„	1	2	1	—	1	—	1	1	7
		21+ „ „	„	1	—	—	—	—	—	—	1	2
		28+ „ „	„	—	1	—	—	—	—	—	—	1
		35+ „ „	„	—	1	1	—	—	—	—	—	2
		42+ „ „	„	—	—	1	—	—	—	—	—	1
				5	25	28	21	15	4	4	11	113

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In order to determine the type of diphtheria amongst those dying, only the hospital cases were considered. Twenty-nine deaths were certified as diphtheria, 36 as faucial diphtheria, 14 as laryngeal diphtheria, and 31 as a combination of faucial and laryngeal or nasal diphtheria. There were 20 cases in which complications of the disease were recorded in the death certificates. Of these, six had paralysis, ten pneumonia, and four had had the operation of tracheotomy performed.

The following table which shows the death-rates per 1,000 of the population since the year 1881:—

1881-1890, ...	0.280	per 1,000 living.	1929, ...	0.124	per 1,000 living.
1891-1900, ...	0.231	"	1930, ...	0.133	"
1901-1905, ...	0.134	"	1931, ...	0.109	"
1906-1910, ...	0.205	"	1932, ...	0.109	"
1911-1915, ...	0.187	"	1933, ...	0.081	"
1916-1920, ...	0.143	"	1934, ...	0.144	"
1921-1925, ...	0.123	"	1935, ...	0.103	"
1926, ...	0.121	"	1936, ...	0.048	"
1927, ...	0.104	"	1937, ...	0.104	"
1928, ...	0.128	"			

The following Report formed part of an article which appeared in the *Lancet* on 9th April, 1938:—

In August, 1937, the first Glasgow epidemic of diphtheria attributed to ice-cream occurred in connection with an ice-cream shop in a south-side industrial ward. It involved 13 persons, including 1 secondary case. A striking feature was the severity of the primary cases, 6 of whom died. The table shows that all but 1 of the cases infected were children, that 9 were infected on one day, and that the majority sickened two days after consuming the ice-cream.

SUMMARY OF CASES.

Case.	Sex.	Age.	Date of eating ice-cream from shop.	Days from eating ice-cream till sickening.	Admission.	Days from eating ice-cream till death.	Type of organism.
			August		August		
1	Girl	... 17	2nd	4	7th	—	—
2	Boy	... 6	8th (and 10th)	2	12th	6	IV
3	Girl	... 4	15th	2	18th	9	IV
4	Sisters	... { 7	15th	2	19th	—	IV
5		... { 5	15th	2	19th	—	IV
6		... { 9	15th	2	19th	—	IV
7	Girl	... 12	15th		19th	10	IV
8	Girl	... 6	15th	2	19th	5	IV
9	Boy	... 8	15th	2	19th	—	IV
10	Boy	... 3	14th	4	19th	21	—
11	Boy	... 5	15th	3	21st*	13	—
12	Girl	... 8	15th	5	22nd	—	—

* Tracheotomy.

Case 13, a boy aged 10, who sickened on August 18th, was a direct contact and playmate of Case 7.

The opportunity for administrative action thus arose on August 20th, the removal to hospital of several cases of diphtheria from a restricted area having then been reported. Special inquiries made on that day regarding the consumption of ice-cream pointed to one of the 13 ice-cream shops in the affected ward. Complete information about recent illness in the shopkeeper's family was not provided till a later date; but the 3 persons found in the shop were swabbed on August 20th and 1 of these, the shopkeeper's daughter, was excluded from the shop as she showed a clinical abnormality in the form of nasal excoriation. Next day she was sent to a fever hospital as nose and throat swabs had been reported positive; the shopkeeper, whose throat swab was negative, was instructed to live away from home and to arrange to buy in his ice-cream; the shop assistant, whose throat had yielded a positive swab, returned to her home in another town. On August 21st also the utensils were sterilised and 24 gallons of ice-cream and "mix" found in the shop were rendered unsaleable by the addition of soap powder pending removal for destruction. On August 24th the shopkeeper was excluded from the shop because a nose swab had been found positive although this throat remained negative. The business was thereafter conducted by a friend. It will be noted that although 2 further cases were admitted to hospital during the investigations they had been infected before these began.

Further details regarding the 3 persons present in the shop when the cases occurred are as follows:—

The shopkeeper had, until July, owned a sweet-shop in a small town in an eastern county where he had sold ice-cream, bought in, at the week-ends only. There had been no undue prevalence of diphtheria in that town. He opened the Glasgow shop on Sunday, August 1st. He proved to be a *virulent nasal carrier (Type IV)*. A heavy pipe and cigarette smoker, he appeared to suffer from mild chronic pharyngitis, and on inquiry, said that he had had a slight cold on or about August 17th. Early in September he was sent to a fever hospital after a throat swab had been found positive.

His daughter, aged 12, who was sent to a fever hospital on August 21st, was suspected of being a *virulent carrier (Type IV)* as the second of four guinea-pig inoculations gave a positive result for virulence. Her tonsils had been removed when she was aged 4, and in February, 1937, she had received one prophylactic antidiphtheria injection.

The shop assistant, aged 19, had come from a town in a Midland county on August 12th to work in the proprietor's shop and to live in his household. She had remained in normal health. Her throat swab was *positive (morphologically only)* and it was not further investigated.

The shopkeeper's home, which was situated at a different address from the shop, was first visited on August 21st. Full information about familial illness was still withheld, but three of the four persons found there were discovered to be infected. They had arrived in Glasgow on August 19th. Information regarding these four persons became available later as follows:—

Daughter, aged 2, in spite of one prophylactic injection in February, 1937, had been a diphtheria patient in a county fever hospital from June 29th until July 24th, when she had been dismissed after two negative swabs. In Glasgow in August a second and subsequent throat swabs proved positive, and in September she was sent to a fever hospital as a *convalescent carrier* on morphological grounds. Her tonsils were enlarged.

Son, aged 5, was found to be a case of *missed nasal diphtheria (Type IV)* and was sent to a fever hospital. His tonsils had been removed when he was aged 2, and on July 14th, 1937, he had received one prophylactic injection.

Daughter, aged 9, gave four negative throat swabs. Her tonsils had been removed when she was aged 7. She had received two prophylactic injections in February, 1937.

The shopkeeper's wife proved to be a *virulent throat carrier (Type IV)*. Her tonsils were slightly enlarged but not inflamed and she had been liable to sore-throat since 1920.

Information was also obtained later regarding the following absentee from the home :—

Daughter, aged 16, had been admitted as a *positive diphtheria* case to a county fever hospital on August 2nd, having sickened the previous day. She had previously had her throat swabbed with negative result on July 1st as a contact of the first case of diphtheria in the household, her sister aged 2. At the beginning of August when this second case of diphtheria was detected the movements and activities of the shopkeeper had not been reported to the county authorities.

It is thus obvious that the shopkeeper and his family provided an abundant source for diphtheria infection. It was also obvious that his business exposed a considerable number of persons to infection. His shop sold 8 gallons of ice-cream daily on weekdays and 12 on Sundays. Children formed a majority of the customers and usually bought a halfpennyworth weighing $1\frac{1}{2}$ oz. Adult customers usually bought a quantity weighing 4 oz. It was calculated that an average of 70 customers would partake of a gallon of the ice-cream. It was of the "custard ice" type and was manufactured by the "hot mix" method. During the early part of the week the proprietor would make "mix" and freeze it daily, but towards the end of the week he would make a large quantity of "mix" and store it for the week-end in uncovered pails on open shelves in the scullery at the rear of the shop.

It is of epidemiological interest to record that in August 6 other cases and in September 8 cases were registered from the affected City ward. No other connection could be established between these and the outbreak. During the previous twelve months the number of cases from this ward had averaged 2.3 monthly; and the numbers returned to this level in October and November when 2 and 3 cases respectively were notified. Three of the 6 August cases died. Two of these fatal cases had been examined for type of organism and Type IV had been reported. Only 1 of the 8 September cases died.

It is probable that few, if any, cases infected in the shop remained untraced. Inquiries regarding consumption of ice-cream were made in August and the early part of September concerning over 100 other cases of diphtheria notified during that period from an extensive south-side area of the City. No further cases connected with the outbreak were discovered. Excluding the affected ward the number of cases registered in Glasgow in August and their fatality were exceeded in other months during the year.

With regard to the bacteriological findings, Dr. H. S. Carter (*Journal of Hygiene*, July, 1936) had found only 10 Type IV strains in 1614 positive swabs examined in Glasgow between May, 1934, and January, 1936. One learned, however, that in 1937 this type had been more often encountered in the City Laboratory and that in the autumn it was recovered from several cases besides those mentioned above.

Clinical reports from hospital stated that 11 of the primary cases showed disease of the tonsils, uvula, and soft palate, and that 1 of these cases had also laryngeal disease; in 1 case membrane was limited to the tonsils. All the primary cases were severe. The secondary case was of moderate severity.

INFECTIONS IN A NEW INSTITUTION FOR CHILDREN.

Two small outbreaks of infectious disease occurred during 1937 in Caldwell House, Uplawmoor, an institution opened in May, 1937, for mentally defective children. The first outbreak occurred during the first three days of July when five children and a nurse sickened of diphtheria. No diphtheria cases were reported from the surrounding county districts, in connection with the milk supply or from the homes or previous institutions of the patients. Throat swabbing

of the inmates and staff, however, revealed that two other children were carriers of virulent diphtheria organisms. Passive immunisation of contacts was performed and no further cases appeared.

The second outbreak occurred during the second half of September and comprised three cases of scarlet, one of erysipelas and two of erysipelas and scarlet. One of these children died. In October the 66 children in the institution were Dick-tested and 11 positives were actively immunised. One further case occurred, however, a girl sickening of scarlet in November five days after admission. In January, 1938, Schick-testing of the 77 inmates was performed and Dick-testing was completed. Schick-positives numbered 20 and a twelfth Dick-positive was discovered, these numbers including two children positive to both tests.

ERYSIPELAS.

The prevalence of erysipelas does not vary much from year to year, although there is usually a seasonal incidence with higher rates occurring during the colder months of winter. During the year, 1,038 cases were registered, compared with 977 in 1936, and, of the total, 674 were removed to fever or general hospitals.

DISEASES OF THE CENTRAL NERVOUS SYSTEM.

Cerebro-spinal Fever.—In 1937 there were 106 cases, compared with 74 during the preceding year. Of the cases registered, 23 were under 1 year of age and 9 between 1 and 2 years. Male cases numbered 72 and females 34 and the deaths were respectively 41 and 13, giving case mortalities of 57 and 38 per cent.

Encephalitis Lethargica.—Thirty cases were reported, of which one only was acute, the other 29 being chronic cases notified for the first time during the year. Of the chronic cases, 15 were removed to Corporation general hospitals, the others remaining at home.

Acute Polio-Encephalitis.—One case of this disease was registered, a female under 35 years of age.

Acute Poliomyelitis.—One case of acute poliomyelitis was registered compared with 26 during the preceding year.

POST-ENCEPHALITIS LETHARGICA.

A survey of the cases of post-encephalitis lethargica in the city shows that there are at present 259 cases, and of these 141 are males and 118 females, compared with 260 known cases at the end of the previous year. Only one new acute case occurred but 30 chronic cases were notified during the year. There were 25 deaths, 18 males and 7 females. An interesting feature is the reported recovery of seven old cases who have been under observation for a number of years and who have been showing steady improvement throughout that time.

The age distribution of the cases is as follows:—

				Males.	Females.	Total.
—15 years,	...	...	...	1	1	2
—20 „	...	...	...	9	7	16
—30 „	...	...	...	56	32	88
—40 „	...	...	...	38	43	81
+40 „	...	...	...	37	35	72
				141	118	259

The physical condition of these patients is as follows:—

				Males.	Females.	Total.
Fit for School,	...	...	...	1	1	2
Unfit for School,	...	...	...	—	—	—
Fit for housework,	...	...	...	—	28	28
Fit for employment,	...	...	...	14	4	18
Unfit but going about,	...	...	...	60	28	88
Bedridden at home,	...	...	...	19	12	31
Cases in general hospitals,	...	...	...	31	35	66
Cases in mental hospitals,	...	...	...	16	10	26
				141	118	259

Two wards in Stobhill Hospital, one for males and one for females, are still occupied by cases of post-encephalitis lethargica, the great majority of which date from the epidemic of 1923. There is a very slow turn-over of cases in these wards as the home conditions are not suitable for their accommodation.

The group of cases originally numbering 70 which has been under the continuous supervision of Dr. Ashie Main of this Department since 1923 now numbers 31 compared with 35 last year, four having died in the interval. The following table shows the clinical classification of this group at the end of 1937:—

Group I.—Recovery complete : 4 cases.

„ II.—Recovery incomplete : Mental retardation, 2 cases ; mental instability, 1 case ; nervous instability, 12 cases ; physical defect and mental instability, 1 case.

„ III.—Perversion of conduct : 1 case.

„ IV.—Parkinsonians : Norman mentality, 3 cases ; abnormal mentality, 7 cases.

MEASLES.

Measles made its appearance in November, 1937, although it was not expected until the early months of 1938. The mortality rate was 1.3 per cent. The following table shows the number of cases recurring during the past four years:—

	Cases.	Deaths.	Mortality Percentage.
1934,	24,607	514	2.1
1935,	893	8	0.9
1936,	20,196	311	1.5
1937,	2,272	29	1.3

The total cases registered numbered 2,272, compared with 20,196 during the preceding year. The epidemic continued into 1938 and will be described in next year's Report.

A quantity of convalescent measles serum was prepared at Knightswood Hospital and with a view to making the best possible use of it a circular was sent to the Medical Superintendents of all the fever, general and other hospitals in the city and to Medical Officers of Health of the surrounding districts, stating that a supply would be sent on request by the Physician-Superintendent at Knightswood Hospital. In a preliminary report on the use made of the serum, Dr. Dow says:—

“I have tabulated the results as well as possible under the circumstances, but of course if I had fuller details I might have been able to give you more information. It is quite evident that prevention has resulted most frequently, although, unless in special circumstances where the child is delicate, a modified attack is to be preferred.”

RESULTS OF THE USE OF CONVALESCENT MEASLES SERUM
IN THE MEASLES EPIDEMIC.

No.		Series.				Modified Attack.	Attack Prevented.
1	10	contacts injected	...	...	...	6	4
" 2	20	" "	...	...	...	11	9
" 3	5	" "	...	...	...	1	4
" 4	22	" "	...	...	...	2	20
" 5	1	" "	...	...	...	—	1
" 6	2	" "	...	...	...	—	2
" 7	2	" "	...	...	...	1	1
" 8	6	" "	...	...	...	4	2
" 9	1	" "	...	...	...	—	1
" 10	7	" "	...	...	...	2	5
" 11	2	" "	...	...	...	1	1
" 12	18	" "	...	...	...	3	15
" 13	18	" "	...	...	...	4	14
" 14	5	" "	...	...	...	3	2
" 15	5	" "	...	...	...	3	2
" 16	25	" "	...	...	...	1	24
" 17	3	" "	...	...	...	—	3
" 18	95	" "	...	...	...	2	93
" 19	2	" "	...	...	...	1	1
" 20	12	" "	...	...	...	10	2
" 21	1	" "	...	...	...	—	1
" 22	3	" "	...	...	...	—	3
" 23	6	" "	...	...	...	—	6
" 24	20	" "	...	...	...	—	20
" 25	28	" "	...	...	...	9	19
" 26	2	" "	...	...	...	—	2
" 27	9	" "	...	...	...	2	7

The number of cases of German measles recorded during the year was 207.

WHOOPIING-COUGH.

The winter epidemic, which began in 1936, extended into 1937 and reached its height in April when 1850 cases were reported. The total cases registered during the year numbered 8,715, compared with 4,243 for the previous year, while 699 patients were removed to hospital. The case rate per million of the population, 7,782, is considerably in excess of the corresponding rate of 3,790 for the preceding year and is the highest since 1931. The total cases for each of the past four years ending 30th June are given in the following table:—

CASES OF WHOOPING-COUGH REGISTERED FOR THE YEAR ENDING JUNE 30.

1933-34,	...	...	...	...	...	3,017
1934-35,	...	...	...	...	...	10,691
1935-36,	...	...	...	...	...	2,106
1936-37,	...	...	...	...	...	6,645

The deaths numbered 285 giving a case mortality of 3.3 per cent. as compared with 1.7 for the previous year. Deaths from pneumonia following whooping-cough are not included in this figure.

CHICKENPOX.

This disease usually has a sustained and general prevalence throughout the city. The number of cases registered in 1937 was slightly less, 6,225, than was the case in the preceding year, when 6,850 were registered. Of the total, 218 were treated in fever hospitals.

TRACHOMA.

The number of definite cases of trachoma on the register at the end of 1937 was 136, a further 11 cases being considered as doubtful. Notifications received during the year numbered 16, of which 15 were new cases and one a re-notification. Of the 15 new cases, 13 were considered to be definitely suffering from trachoma, the remaining two being doubtful. One old case of trachoma returned for treatment.

During the year 12 cases were removed from the register for the following reasons—considered cured, 1; left the city, 4; died, 2; removed, left no address, 5. Every endeavour was made to obtain the attendance of home contacts of new cases at the dispensary. A total of 13 contacts were examined and amongst these one definite case of trachoma was discovered. Conjunctivitis of varying degree was noted in six other contacts.

The trachoma clinic was attended by 124 individuals during the year, the total number of attendances being 3,266, of which 1,184 were consultations with the ophthalmic surgeon and 2,082 were for treatment by the nurse. There were few operations at the dispensary; one patient was treated by expression, one by the electric cautery, and two for the removal of chalazion.

Nine cases of trachoma were admitted to Stobhill Hospital, four for the first time, while five were re-admissions. Dr. Spence Meighan in his report points out that all the patients were undoubtedly suffering from trachoma. The four cases admitted for the first time were all of the acute type, and in the early stages of the disease. Expression of the trachoma follicles was carried out under

general anæsthesia in two of these acute cases. In addition, one eyelid operation was performed under general anæsthesia on one of the re-admitted cases. Treatment was carried out on similar lines to that of previous years. All the cases were dismissed greatly improved, and in one of the acute cases the progress of the disease might be said to have been finally arrested.

MALARIA AND DYSENTERY.

Malaria.—In 1937 the number of cases recorded was 14, of which 3 were removed to fever hospitals. 13 were males, and 1 female, and only 1 case occurred under 25 years of age.

Dysentery.—In 1937 there were 273 cases of dysentery, compared with 239 during the preceding year and 135 in 1935. Of the total cases, 123 were under 15 years. The largest number of cases registered in any one ward was 14 in Hutchesontown, 11 in Townhead, 8 in Cowcaddens, followed by 7 in Govan Ward.

DYSENTERY.

The number of cases registered was 272, the highest annual number on record in Glasgow. The excess over the previous year's total of 239 is accounted for by an increase in institutional cases from 111 to 145. The seasonal incidence of the cases was as follows:—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Home infections ...	12	19	43	53	127
Institutional infections,	31	7	37	70	145

Bacillary dysentery showed increased prevalence in many other parts of Britain during the second half of 1937 and received considerable attention in the medical press. A bacteriological study of Glasgow cases by Dr. H. S. Carter of the Laboratory staff was published in the *Journal of Pathology and Bacteriology* in 1937 (vol. 2, p. 447), while an epidemiological study by Dr. E. Bloch of the administrative staff appeared in the *British Medical Journal* on 16th April, 1938. Details of institutional outbreaks are given below.

Dysentery among Children in a General Hospital.—During the first quarter of the year 23 young children and 2 nurses were notified from a large municipal general hospital. The organisms concerned were reported as Sonne and Flexner W, X and Z. Again, during August and September 23 young children and 2 adults were notified from this institution as suffering from dysentery due to Sonne and

Flexner W, X and Y organisms. A total of 60 cases was reported from this institution during the year, mainly due to Flexner organisms. While case-to-case spread accounted for most of the cases, several foci of infection could not be traced to any source.

Fever Hospital Staff Outbreak.—An outbreak of Sonne dysentery affected the nursing staff of a fever hospital between October 21 and November 4. The number of cases sickening on successive days from October 21 was 1, 2, 2, 2, 2, 3, 5, 5, 3, 4, 1, 2, 1, 0, 2. The first proved case, in fact, occurred on the medical staff on 24th October but it was subsequently found that there had been a few cases of diarrhoea prior to this date. In all, there were 35 cases who complained of diarrhoea when a careful history was taken. Only 15 of these cases however were warded, and in 14 of these the diagnosis was established by the recovery of the bacillus dysenteriae Sonne from the stools. Owing to the large number of cases 13 nurses were selected at random from the staff (including three who had complained of diarrhoea). Specimens of blood were obtained and the serum tested against standard Oxford cultures of *B. dysenteriae* Sonne. In two cases the organism was agglutinated to an end titre of 1:250. These results were obtained in two of the nurses who had complained of diarrhoea. The third nurse who had diarrhoea and all the others failed to agglutinate the organism. It was found impossible to assign a definite cause to the epidemic as the outbreak was confined entirely to the staff, no cases occurring among the patients. There were no cases of bacillary dysentery of that type in the wards when the outbreak started. Milk as a source of infection was ruled out by the fact that no patients developed the disease. The nurses' food is all cooked in a separate kitchen but the occurrence of a case on the medical staff, whose food is cooked in the large kitchen, seems to exclude the possibility of a food carrier transmitting the organism since the staffs of the two kitchens are separate. Food infected before entry to the hospital seems the likeliest source. It should be noted that as the epidemic occurred in the early winter uncooked foods did not appear on the dietary. Fresh fruit, however, is supplied every Wednesday to medical and nursing staffs, and October 20 was in fact a Wednesday and the outbreak appears to have commenced on the 21st. Finally, there is little doubt that many of the cases were infected by direct contact with nurses suffering from the disease and originally nursed in the Nurses' Home. The opening of a ward specifically for the cases caused a rapid cessation of the epidemic.

Small Outbreak in a Mental Institution.—Between the end of November, 1937, and the middle of January, 1938, 11 cases of Sonne dysentery occurred among the staff and female patients in a large mental institution. Five of the cases gave positive results for Sonne. The missed primary case was an inmate of old standing. The institution had good facilities both for investigation and for isolation; and extensive spread within the institution was prevented. The notifications were included in the January, 1938, figures.

Flexner Ward Outbreak.—In September nine men were notified as cases of Flexner dysentery from one of the hospital wards in the large general institution which later housed the big outbreak described below.

A LARGE OUTBREAK OF SONNE DYSENTERY.

The first large Glasgow outbreak of Sonne dysentery occurred in a big general municipal institution towards the end of November, 1937, and continued till the end of January, 1938. In December 42 cases were registered from this focus and only two from other Glasgow institutions. Although the possible sources of introduction of dysentery into the institution were more numerous than usual, it is to be remarked that of the 10 Glasgow home infections registered in November and of the 28 registered in December only 1 and 4 respectively occurred in the city division containing the institution. Moreover, apart from a few households whence patients were admitted suffering from frank dysentery, no infections were reported from the homes of infected patients, a large proportion of whose visitors would be derived from these homes. Also, no dysentery cases were registered from the homes of the infected staff members.

The epidemic assumed the form of two successive waves of infection. The following number of acute cases, all positive for Sonne except one positive for unspecified dysentery, sickened in successive weeks from November 20: 1937, 2, 20, 5, 4, 0, 9; 1938, 15, 6, 1, 1, 2, 0; making a total of 65 positive acute cases of Sonne and unspecified dysentery. Other positive findings were:—

Cases admitted with dysentery; Sonne 6, Flexner 1.

Acute institutional infections: Flexner 1, Flexner W 1.

Symptomless temporary carriers: Sonne 8, Flexner 1, Flexner X 2, unspecified 1.

Total positive findings: 86, including 78 Sonne.

Acute cases numbered 67 as detailed. Only 20 other persons were regarded as clinical cases yet gave negative specimens. These were not notified, but they would raise the total of infected persons to 106. Negative specimens were also obtained from 114 persons with loose motions or incontinence and from 272 persons free from suspicious symptoms. Six of the positive cases ended fatally during December and January. These persons were all elderly, and suffered, moreover, from pre-existing illnesses.

The patient admitted with Flexner dysentery and two patients admitted with Sonne dysentery produced no secondary cases. Of the 6 patients admitted to the hospital wards suffering from Sonne dysentery 4 were associated with only 6 other cases that could be regarded as possibly attributable to the admissions, even when among the secondary cases is included one sickening two and a half hours after the admission of a dysenteric patient to an adjacent bed in an otherwise uninfected ward. In one of these groups the interval between the removal of one secondary case and the sickening of another was eight days.

Since many of the cases were clinically extremely mild it is not surprising that 8 persons were classified as symptomless Sonne carriers. None of the carriers could reasonably be regarded as chronic. Five of 9 staff members found positive were symptomless.

There was no definite evidence of spread of infection by food, milk, or water, but it was thought important that the milk supplies should be scalded in the wards and attention devoted to the methods of cleansing food utensils, especially milk containers, passing through the central kitchen and dairy premises. It will be noted that no incidence of Sonne dysentery was detected in these departments, all the members of the staff of which were examined bacteriologically.

The most noteworthy feature of this outbreak was the apparently sporadic way in which some of the affected individuals sickened within the institutional community. The first cases in the institution were female inmates of old standing in the chronic sick block. The disease subsequently appeared in other non-admitting blocks of the institution. Similarly, acute infection reappeared in wards which had been free from dysentery cases for two to four weeks and in which the presence of carriers had not meanwhile been

demonstrable. The following list gives some details of incidence in all sections of the institution.

Female chronic sick wards :

9 of 17 wards affected between November 20 and January 27

Inmates 192. Positive findings : 41, including 1 nurse.

Male chronic sick wards :

6 of 18 wards affected between December 3 and January 29.

183 inmates. Positive findings : 13, including 1 nurse and 1 maid.

Male mental observation wards :

90 inmates. 3 positive acute cases on December 3.

Male mental wards :

159 inmates. 4 positive acute cases, January 6-11.

Female mental wards :

222 inmates. 3 positive acute cases, January 3, 3, and 31

Female mental observation ward :

27 inmates. No cases.

Hospital wards :

8 of 19 wards affected from December 12 to January 16. Total inmates, 523. Positive findings : 17, including 1 doctor, 7 admissions, and 6 possibly secondary cases.

Staff :

Total 643, of whom 233 lived in and 410 lived out. 5 positive findings—namely, 3 nurses (not employed in any infected ward), a kitchenmaid (Flexner X carrier), and a food porter to chronic sick block (Flexner carrier). 2 nurses, 1 maid, and 1 doctor are mentioned above. Of the 5 nurses infected 3 were symptomless Sonne carriers, so that 5 of the 9 staff members found positive were symptomless.

Total population of institution,	1,629	} 2,039
Non-resident staff,	...	...	410
Persons examined bacteriologically, including	...	...	492
those found positive,	...	...	...
Positive findings,	86

OTHER INFECTIOUS DISEASES.

A record of the other infectious diseases dealt with, together with the number of each treated in hospital, is given in Appendix Table XVII. Among these are included ophthalmia neonatorum and various forms of pneumonia, which are dealt with in other sections of the Report. There remain certain other diseases which are here briefly referred to.

ANTHRAX.

No case of human anthrax occurred within the city during the year, but two cases from an adjacent county were treated in Ruchill Hospital. Both cases had contracted the disease when cutting up the carcase of a bullock, which on later examination was found to have died from anthrax. Serum was administered and both cases made a satisfactory recovery.

On two occasions during the year farm premises within the city were declared Infected Places under the Anthrax Order, 1928. In co-operation with the Veterinary Surgeon's Department the necessary disinfection of premises and examination of workers was carried out.

The practice of binding orange boxes with goatskin thongs continues, but no samples were submitted for examination for anthrax. Several samples of imported hides were examined by the Bacteriologist, but with negative results.

DIARRHŒA AND ENTERITIS.

The mortality from these digestive disorders was less heavy in 1937, 435 deaths being recorded, compared with 536 during the preceding year.

AGE IN YEARS.

			-1	-5	5+	Total.
1933,	...	...	310	51	52	413
1934,	...	...	211	31	37	279
1935,	...	...	280	24	59	363
1936,	...	...	432	49	55	536
1937,	...	...	349	31	55	435

The highest ward mortalities, per million of the population, from diarrhœa among children under two years of age were 1,081 in Exchange, 823 in Mile-end, 773 in Whitevale, 757 in Gorbals, and 730 in Cowcaddens. The average for the city was 332.

The table which follows shows the mortality in each month of the year, and indicates that children are more vulnerable during the autumn months:—

DIARRHŒA AND ENTERITIS.

Month of Death.	Number of Deaths —1 Year.	Mean Temp.	Month of Death.	Number of Deaths —1 Year.	Mean Temp.
Jan., ...	23	40	July, ...	26	59
Feb., ...	15	38	Aug., ...	41	60
March, ...	16	37	Sept., ...	48	53
April, ...	18	47	Oct., ...	48	47
May, ...	27	53	Nov., ...	31	41
June, ...	35	56	Dec., ...	21	35

RABIES.

No case of rabies is known to have occurred, but a number of persons bitten by dogs were reported by the police for inquiry. These are shown in relation to the season of occurrence and the severity of the bite:—

						Slight.	Serious.
1st Quarter,	...	...	...	...	...	80	4
2nd Quarter,	...	...	...	...	...	153	6
3rd Quarter,	...	...	...	...	...	128	7
4th Quarter,	...	...	...	...	...	76	10
						437	27
						464	
						<hr/>	
1936,	...	379		1935,	...	376	

In addition to the above, 15 persons were bitten by horses, 7 by cats, and 1 by a monkey.

INFECTIVE JAUNDICE.

Three cases of infective jaundice occurred during the year.

Acute Infective Jaundice or Weil's Disease.—Two cases, of which one proved fatal, were reported early in October, 1937. The first case was that of a young woman who was employed as a tripe dresser in the slaughter-house. She suddenly became ill on 9th September, 1937, complaining of severe headache, shivering, and occasional vomiting. Six days after sickening she developed a well-marked jaundice with numerous small petechial spots on chest, abdomen, and legs. She ran a pyrexial course for about three weeks, followed by a slow convalescence. The diagnosis of Weil's Disease was confirmed by agglutination tests and also by the recovery of the leptospiræ from the urine by guinea-pig inoculation. There were 25 females employed in the same place as the patient, but only a few of them had ever suffered from influenzal symptoms or tonsillitis and none ever had jaundice. Serological examination of these 25 women gave positive reactions in five. The abattoir, although well paved and maintained in a very good condition, is rat-infested. Twelve rats caught in the tripery were examined, and nine of them gave positive serological reactions, but in only two animals were the leptospiræ isolated by guinea-pig inoculation and culture. An important point is that the patient cut her hand about ten days before sickening.

The other case, which proved fatal, occurred in a man aged 34 years, who followed for four years the occupation of sewerman. His illness was less sudden in onset, commencing on 22nd September, 1937, with generalised pains more especially affecting back and legs. Jaundice appeared on the seventh day of illness, and he had two attacks of epistaxis. He died ten days after sickening. The diagnosis was confirmed by serological and post-mortem examinations. It is well known that rats use the sewers as broad highways of migration.

Enquiry into the medical history of 35 seweremen in the city revealed the fact that quite a number had suffered from influenzal symptoms at some time or another. A few gave a history of jaundice as far distant as twelve years ago. Serological examination carried out on these workers gave a result of five men with positive reactions. Two seweremen died, one in 1935 and the other in August, 1937. These deaths were certified as due to conditions of the liver, and probably they were cases of Weil's Disease, as both were severely jaundiced and died in about ten days from sickening. Examination of rats and other material is not yet completed.

These two cases show some features in common:—(1) The presence of rats in place of employment; (2) History of injury in one case and probably injury in the other (seweremen being very liable to cuts and scratches); and (3) Working amongst water—probably contaminated by *leptospiræ*.

The literature on the subject has recorded cases occurring amongst butchers and workers at slaughter-houses, and much work has been done in investigating the disease amongst seweremen in London. The above two cases are the first to be reported in these occupations in Glasgow, but they are obviously not the first cases that have occurred.

A full investigation is being made into the circumstances and conditions of employment of these workers in co-operation with the Inspecting Departments in order to ascertain what preventive measures should be adopted. Various preventive measures suggested have been adopted.

SECTION V.

RESPIRATORY DISEASES AND TUBERCULOSIS.

During the year there were 2,705 deaths from diseases of the respiratory system, compared with 2,440 for the preceding year. This increase of 265 deaths is more than accounted for by deaths due to influenza in January and February which numbered 496 as against 144 for last year. Towards the end of December, 1936, there was a general prevalence of influenzal catarrhs in schools and workplaces. During the week ended November 28 there had been a considerable amount of fog, lasting for four days, accompanied by a moderately increased mortality from pneumonia. Early in December there was an indication that influenza was present in the eastern parts of the country, and during the week ended January 9 there occurred 32 deaths from influenza, compared with 10 for the preceding week, and 56 deaths from pneumonia, as against 42; the general death-rate rose to 21·3 compared with 16·5 for the previous week. By the second week in January the outbreak of influenza had reached its height, 122 cases of acute influenzal pneumonia being registered and 273 cases of acute primary pneumonia. Thereafter the outbreak commenced to subside. The following table gives the morbidity and vital statistics for weekly periods covering two months around the outbreak.

	1936. Dec. 26.	1937. Jan. 2.	Jan. 9.	Week ending		Jan. 16.	Jan. 23.	Jan. 30.	Feb. 6.	Feb. 13.
Total Deaths (corrected for transfers) ...	289	358	464	590	587	437	427	344		
Death Rate (per 1,000) ...	13·3	16·5	21·2	26·9	26·8	19·9	19·5	15·7		
Deaths from Pneumonia ...	35	42	56	78	86	50	43	17		
Deaths from Influenza ...	4	10	32	121	106	58	36	18		
Cases registered—										
Acute Primary										
Pneumonia ...	106	119	213	273	308	191	140	122		
Acute Influenzal										
Pneumonia ...	5	8	51	122	115	78	36	25		
Mean Temperature ...	44·8	42·2	43·9	42·4	41·5	37·8	42·1	37·5		

As a result of special enquiry regarding illness amongst staffs and attendance at schools, the following information was obtained.

		Week ending 8th January.	Week ending 15th January.	Remarks.
Large General Hospital—				
Nursing Staff of 400	...	6%	6.5%	On Sick List.
Domestic Staff	...	6%	9%	On Sick List.
Large Fever Hospital—				
Nursing Staff	...	5.5%	5%	On Sick List.
Domestic Staff	...	8%	13%	On Sick List.
Police—				
2,300 Uniformed Staff	...	119	150	On Sick List.
		58	99	Off with Influenza. (Figures for intervening days were 67, 71, 68, 85, 95.)
Transport Department—				
5,000 Uniformed Staff	...	320	359	On Sick List. (Compared with normal of 200 and 300 at this time of the year.)
Four Large Schools—				
East	...	15%	25%	Absent.
North	...	15%	25%	Absent.
West	...	19%	23%	Absent.
South	...	19%	23%	Absent.

The total influenza death-rate for the year, 443 per million of the population, is more than three times the mortality rate of 127 for the preceding year and is the highest since 1929 when the mortality from influenza was 878 per million. In that year the outbreak began early in January during a period of exceptionally severe weather accompanied by dense fog. These conditions were responsible for a very heavy mortality from other forms of respiratory disease such as pneumonia and bronchitis and the death-rate at that time rose to over 50 in the fourth week of the year whereas the maximum death-rate from all causes during this prevalence approached only 27 in the second and third weeks of the year.

Year.	Pneumonia.		Influenza.		Other Respiratory Diseases.	
	Deaths.	Rate per million.	Deaths.	Rate per million.	Deaths.	Rate per million.
1926	...	1,758	386	360	975	909
1927	...	1,792	204	187	881	808
1928	...	1,801	210	193	813	746
1929	...	2,447	878	806	1,212	1,113
1930	...	1,774	160	147	852	782
1931	...	1,533	207	190	671	617
1932	...	1,917	454	415	815	744
1933	...	1,346	244	221	698	632
1934	...	1,619	160	143	629	564
1935	...	1,516	297	265	709	633
1936	...	1,596	144	129	700	695
1937	...	1,543	496	443	666	595

Pneumonia deaths during 1937 were fewer, 1,543 compared with 1,596, and so also were other respiratory deaths, mainly bronchitis, 666 against 700. The respective death-rates per million of the population compare favourably with those of previous years.

Notifications of pneumonia for the years 1936 and 1937 were as follows :—

		1936.	1937.
Acute Primary Pneumonia ...	...	5,827	5,860
Acute Influenzal Pneumonia ...	...	208	562

TUBERCULOSIS.

By Dr. W. A. Horne.

There was little alteration in the total number of cases of pulmonary tuberculosis notified during the year—1,654 compared with 1,647 for the previous year—but a still further increase occurred in the number of notifications of pulmonary tuberculosis among girls of 15-25 years of age. The following table illustrates the continued increased prevalence among females in this age group.

		1932.	1933.	1934.	1935.	1936.	1937.
Male ...	...	253	221	207	229	242	239
Female	...	263	280	320	306	340	370
Total	...	516	501	527	535	582	609

The age distribution table illustrates the difference between the incidence of phthisis in the male and in the female.

	-5	-10	-15	-20	-25	-35	-45	-55	-65	+65	Total.
Male ...	27	25	37	113	126	168	141	142	83	16	878
Female...	26	28	48	180	190	156	73	42	22	11	776

While the maximum incidence in the female occurs in the 15-35 age group, in the male the disease is predominantly an affection of the later age period 35-55. This characteristic of phthisis militates against the best use being made of institutional treatment. The patients affected include many mothers of young families and most of the male patients are the breadwinners. In neither case is there much willingness to stay in hospital for the long period necessary to obtain cure or even amelioration of the condition, and it not infrequently happens that patients in these groups terminate treatment after a relatively short stay in hospital.

The presence or absence of tubercle bacilli in the sputum of patients suffering from pulmonary tuberculosis has a marked bearing on their ultimate fate and possibly on the fate of their near relatives. For this reason the sputum of patients attending the clinics or undergoing treat-

ment in hospital is frequently examined. During 1937 out of the 5,459 patients suffering from pulmonary tuberculosis on the register 2,731 were found to have the germ in their sputum. This gives a percentage of 50·3 compared with 50·2 for 1936.

Mortality Statistics.—There were 955 deaths from pulmonary tuberculosis during the year as compared with 979 in 1936. Of this number 592 or 62 per cent. died in institutions. The death-rate from pulmonary tuberculosis for the city was 0·853 per thousand and, as will be seen from the following table, very little change has occurred in this figure during the past ten years.

GLASGOW—DEATH-RATES FROM PULMONARY TUBERCULOSIS.

1881-1890	...	2·680	per 1,000	1927	...	...	0·869	per 1,000
1891-1900	...	2·015	"	1928	...	...	0·876	"
1901-1910	...	1·533	"	1929	...	...	0·941	"
1911-1915	...	1·346	"	1930	...	...	0·805	"
1916-1920	...	1·191	"	1931	...	...	0·865	"
1921	...	1·007	"	1932	...	...	0·890	"
1922	...	0·946	"	1933	...	...	0·824	"
1923	...	1·029	"	1934	...	...	0·783	"
1924	...	1·026	"	1935	...	...	0·868	"
1925	...	0·943	"	1936	...	...	0·874	"
1926	...	0·876	"	1937	...	...	0·853	"

The phthisis death-rate forms a very good index of the magnitude of the problem in the city; the following table compares Glasgow with other large towns.

PHTHISIS DEATH-RATES PER 100,000 IN CERTAIN TOWNS.

	1930.	1931.	1932.	1933.	1934.	1935.	1936.	1937.
Glasgow	81	87	89	82	78	87	86	85
Edinburgh	80	70	70	70	70	57	61	64
Dundee	76	73	61	58	54	67	60	57
Aberdeen	51	69	46	54	52	40	40	40
London	87	90	82	82	76	68	69	71
Liverpool	123	115	112	116	100	94	82	79
Manchester	115	112	100	100	97	92	87	88
Birmingham	90	91	83	85	71	71	71	72

Tuberculosis Administration.—The number of primary attendances at the tuberculosis dispensaries in 1937 was 3,311 as compared with 2,994 for 1936. The subsequent attendances numbered 50,615 which is 5,682 below last year's figure. On the other hand, the health visitors paid 53,134 domiciliary visits—an increase of 1,187 over the number for 1936.

Housing Conditions.—Slow progress continues to be made in the rehousing of tuberculous families. The scarcity of suitable houses is responsible for the increasing number of applicants on the waiting list. This year a further 308 families were recommended to the City Improvements Department, of whom 42 were rehoused during the year. In

addition, 83 families recommended in previous years were rehoused in 1937, making a total of 125 which compares adversely with the figure of 182 for 1936 and 278 for 1935.

Institutional Provision.—No alteration was made during the year in the institutional accommodation for the treatment of tuberculosis. The admissions to the various hospitals and sanatoria are shown in the following table.

Year.				Local Authority Hospitals.	Sanatoria.	L. A. General Hospitals.	Total.
1926	...	...	...	1,637	425	738	2,800
1927	...	...	...	1,458	413	615	2,486
1928	...	...	...	1,429	418	819	2,666
1929	...	...	...	1,501	494	753	2,748
1930	...	...	...	1,762	608	549	2,919
1931	...	...	...	2,188	477	289	2,954
1932	...	...	...	1,981	457	411	2,849
1933	...	...	...	1,906	350	503	2,759
1934	...	...	...	1,800	351	412	2,563
1935	...	...	...	1,944	424	447	2,815
1936	...	...	...	2,047	359	334	2,740
1937	...	...	...	2,032	369	331	2,732

Collapse Therapy.—Progress is still being made in the treatment of tuberculosis by collapse therapy. The surgical unit at Robroyston Hospital continues to deal with increasing numbers of cases requiring artificial pneumothorax treatment, adhesion section, or thoracoplasty. The section of adhesions is a complementary procedure to the continuance of an artificial pneumothorax. The presence of a large cavity in a case with an imperfect artificial pneumothorax is usually due to a strand of tissue stretching from the cavity to the chest wall. Such a pneumothorax cannot be regarded as successful as sooner or later the disease will spread from the cavity into other parts of the lung. The highly specialised technique for cutting these adhesions has been developed at Robroyston and many cases have been dealt with satisfactorily.

The refill centre at Baird Street continues to do good work as the following table shows.

Refills.	Aspirations.	Screened.	New Cases.		Abandoned.		No. Attend- ing at 31/12/37
			M.	F.	M.	F.	
2,955	52	3,680	58	48	35	43	292

The number of refills has fallen consequent on the discontinuance of some cases and the decrease in the number coming for the first time.

Non-pulmonary Tuberculosis.—The number of new cases of non-pulmonary tuberculosis with the location of the disease and the age incidence is shown in tables A and B.

TABLE A.
SHOWING NON-PULMONARY TUBERCULOSIS CASES REGISTERED
WITH LOCATION OF DISEASE AND SEX.

Year.	Glands.		Bones and Joints.		Abdomen.		Meninges.		Multiple.		Others.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1917	203	266	196	170	155	113	93	95	41	34	70	57	758	735
1918	186	265	158	143	119	128	92	107	34	30	78	72	667	745
1919	138	178	164	127	126	123	93	86	40	29	56	47	617	590
1920	138	145	193	168	116	112	89	83	39	29	44	29	619	566
1921	149	171	165	127	116	84	78	74	27	29	68	53	603	538
1922	134	147	141	124	130	111	75	66	20	24	42	36	542	508
1923	145	155	181	129	145	118	102	75	16	15	78	75	667	567
1924	149	150	145	130	140	144	104	81	35	36	65	42	638	583
1925	145	137	150	139	131	114	75	65	29	24	54	52	584	531
1926	135	137	142	131	115	109	78	57	24	35	35	33	529	502
1927	131	148	186	134	127	106	89	61	22	17	45	35	600	501
1928	132	152	150	138	113	99	84	86	20	10	61	62	560	547
1929	117	154	138	107	109	104	86	85	10	12	38	32	498	494
1930	111	130	124	130	129	117	98	116	9	7	44	32	515	532
1931	101	139	137	115	101	99	90	87	12	14	50	31	491	485
1932	98	141	134	104	114	105	92	68	6	9	48	38	492	465
1933	99	103	115	109	83	70	59	56	12	8	44	37	412	382
1934	84	106	98	93	64	68	51	52	5	3	44	29	326	351
1935	82	84	107	74	54	62	70	70	9	2	34	26	356	318
1936	69	83	120	83	73	65	90	65	5	7	30	21	387	324
1937	73	91	88	73	60	60	65	62	6	2	39	23	331	311

TABLE B.
AGE-DISTRIBUTION OF NON-PULMONARY TUBERCULOSIS CASES
REGISTERED DURING EACH YEAR.

Year.	Under 1 year.		1-5 years.		5-10 years.		10-15 years.		Over 15 years.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1917	52	48	190	134	157	156	117	149	242	248	758	735
1918	30	33	163	169	137	125	129	142	208	276	667	745
1919	45	28	151	109	142	123	78	136	201	194	617	590
1920	57	35	143	122	128	137	110	94	181	178	619	566
1921	51	35	157	111	133	122	81	94	181	176	603	538
1922	38	28	175	150	103	87	71	79	155	164	542	508
1923	59	19	214	165	116	112	86	79	192	192	667	567
1924	50	39	212	171	96	99	103	85	177	189	638	583
1925	48	22	184	144	111	103	71	77	170	185	584	531
1926	28	22	162	127	109	88	63	78	167	187	529	502
1927	31	28	171	102	130	82	73	77	195	212	600	501
1928	29	17	152	104	115	112	83	60	180	255	559	548
1929	32	27	132	102	111	95	63	66	160	204	498	494
1930	31	27	145	137	116	124	62	74	161	170	515	532
1931	26	17	126	106	101	97	67	71	171	194	491	485
1932	20	18	130	80	94	78	72	75	176	214	492	465
1933	15	18	79	60	94	81	65	61	159	162	412	382
1934	14	11	72	58	66	65	61	48	113	169	326	351
1935	13	9	74	58	67	54	56	50	146	147	356	318
1936	22	7	108	70	64	47	53	39	140	161	387	324
1937	19	10	72	62	53	42	51	54	136	143	331	311

There has been a marked fall in the incidence, mainly due to the decrease in the affections of bones and joints and meninges, although the number of cases suffering from the abdominal form of the disease has also fallen.

The marked rise in the incidence of non-pulmonary disease in children under 5 years in 1936 is now balanced by an equivalent fall in 1937.

Tuberculous Meningitis.—During 1937 an effort was made to examine by X-ray and other methods the adult contacts of all children under the age of 5 dying during the year from tuberculous meningitis, miliary tuberculosis, or acute pulmonary tuberculosis. The number of children aged under 5 who died from these causes during the year was 72. Of these, 15 had been contacts of other tuberculous persons prior to 1937—7 had been contacts of open pulmonary tuberculosis, 4 of pulmonary tuberculosis where the results of sputum examination were negative or unknown, and 4 of non-pulmonary tuberculosis. Of the remaining 57 children, 14 were contacts of tuberculosis at the time of sickening—11 of open pulmonary tuberculosis, 2 of sputum-negative pulmonary tuberculosis, and 1 of non-pulmonary tuberculosis.

The 72 children who died were regarded as having 182 adult contacts, *i.e.*, aged 15 years or over. Of these contracts, 99 refused to submit themselves to X-ray examination. The 83 adult contacts available for examination comprised the 14 tuberculous contacts previously referred to and 69 others not recently or never previously examined at the tuberculosis dispensary. X-ray of these 69 persons raised the question of tuberculosis in only 12 instances. Of these 12 persons, 11 were considered to be healed cases of intrapulmonary tuberculosis and 1 was found to be a sputum-negative case of pulmonary tuberculosis of low activity. Thus, as a result of the inquiry, only 1 new case of pulmonary tuberculosis was detected among the adult contacts investigated.

Tuberculosis of the Skin.—In May, 1937, the Corporation granted the Department permission to purchase three Finsen-Lomholt lamps for the treatment of lupus, but it will be well into 1938 before the installation is completed. The lamps are costly and, in addition, are subject to a considerable customs duty which, with the necessary electrical fittings, will make the completed installation expensive. On the other hand, the excellent results procured elsewhere amply justify the provision of this modern treatment for cases suffering from this disfiguring disease.

The following table shows the death-rate per million of the population from non-pulmonary tuberculosis from 1906 with meningitis and abdominal tuberculosis shown separately. The figures for the year are the lowest on record.

GLASGOW.—DEATH-RATE PER MILLION OF THE POPULATION.

Year.		Tuberculous Meningitis.	Abdominal Tuberculosis.	Other Forms.	Total.
1906-1910	...	416	278	255	949
1911-1915	...	285	197	183	665
1916-1920	...	210	167	170	547
1921-1925	...	163	103	122	388
1926	...	142	69	106	317
1927	...	148	62	103	313
1928	...	148	59	110	317
1929	...	140	64	99	303
1930	...	182	51	104	336
1931	...	153	55	110	318
1932	...	134	46	89	269
1933	...	96	44	106	246
1934	...	100	31	85	216
1935	...	116	30	69	215
1936	...	144	32	84	260
1937	...	108	31	72	211

X-RAY WORK.

The following table shows the amount of work done at the various institutions:—

Institution	Skiagraphed.		Skiagraphs.	Screen Examina- tion only.	Total
	Indoor.	Outdoor.			
Ruchill ...	1,582	5,966	8,610	1,094	8,642
Robroyston ...	1,164	—	2,640	244	1,408
Mearnskirik ...	1,561	—	3,663	12	1,573
Bellefield ...	179	—	288	1,040	1,328
Baird Street ...	—	17	17	3,680	3,697

During the year the X-ray plant at Knightswood Hospital was installed and is in running order. It has been found of very great assistance in the improved diagnosis and treatment of the cases of pulmonary tuberculosis in the hospital and also in the diagnosis of obscure conditions admitted to the pneumonia and other wards. No difficulty has been found by the hospital staff in running the plant and excellent films of all parts of the body have been produced.

Considerable changes and improvements are contemplated during the coming year with regard to the modernising and installation of X-ray plant in the Department's hospitals and sanatoria. A recent

development in X-ray work is tomography, a means by which films can be taken to show the state of the tissues at various levels. This development is of very great advantage in the diagnosis of cavities in cases of pulmonary tuberculosis, and it is proposed to set up suitable apparatus in Robroyston and Ruchill Hospitals. It has also been considered necessary to equip Belvidere Hospital with an X-ray plant. In the past doubtful cases have had to be transferred by ambulance to Ruchill Hospital—not a very satisfactory procedure. Suitable accommodation has been found for an X-ray room with a developing room and a small office. The plant should be in action before the end of 1938. The X-ray equipment in Bellefield Sanatorium is very much out of date, having been transferred from Robroyston Hospital some years ago. A new four-valve outfit, capable of taking X-ray films with the short exposure necessary to obtain a reasonable standard of clarity, is being considered.

BAIRD STREET ACTINOTHERAPY CLINIC.

By Dr. Alex. Maclean.

The number of patients attending this clinic at the end of 1937 was 141, as compared with 200 at the end of 1936.

The results of treatment in 183 patients who ceased attendance at the clinic during 1937 are given in the table below. This table does not include details of 15 patients who had less than one month's treatment. In it the expression "healed" refers not only to firm healing but also to exceptional improvement, the expression "improved" implies distinct improvement and the expression "not improved" denotes either absence or poorness of a favourable response to treatment.

Number of Patients.					Average Duration of Treatment in Months.		
	Healed.	Improved.	Not Improved.	Total.	Healed.	Improved.	Not Improved.
Superficial Adenitis	61	46	9	116	9.2	4.8	2.7
Lupus Vulgaris ...	8	6	5	19	27.5	14.5	6.6
Abdominal							
Tuberculosis ...	5	6	—	11	10.6	10.7	—
Bone and Joint							
Tuberculosis ...	7	2	2	11	14.1	20.5	1.5
Dactylitis ...	2	1	—	3	34.0	4.0	—
Other Tubercular							
Conditions ...	4	2	—	6	11.3	5.0	—
Miscellaneous—							
(a) Hilum Adenitis	6	2	—	8	5.0	2.0	—
(b) Bronchitis ...	2	2	—	4	11.0	11.0	—
(c) Others ...	1	4	—	5	3.0	6.5	—
	95	72	16	183			

Superficial Adenitis.—116 cases of superficial adenitis or 63·4 per cent of the whole, were dismissed during 1937. The result was “healed” in 61 patients, of whom in 24 cases, the glands had remained hard and in 37 cases there had been abscess-formation; of the latter, 6 had healed after aspiration of pus, 20 had required incision and in 11 there had been spontaneous sinus formation. The result was “improved” in 46 patients, of whom in 13 cases the glands had remained hard and in 33 cases there had been abscess-formation; of the latter, 2 had not required removal of pus, 7 had healed after aspiration, 10 after incision and in 14 there had been spontaneous sinus formation. The “not improved” group consisted of 9 patients; in 3 of these, the glands remained hard and in 6 there was abscess-formation, including 1 case which required aspiration, 3 cases which required incision and 2 which discharged spontaneously.

In most of the cases of superficial adenitis which are under treatment at the clinic the glandular enlargement is found in the neck. All these cases are given general irradiation from a carbon arc lamp and local irradiation to the affected region from a mercury vapour lamp either of the ordinary type or of the Kromayer type, the latter being used particularly in cases which seem to be somewhat resistant in response to irradiation from the former lamp. It is customary to advise treatment, directed preferably to eradication, of septic foci in the throat or mouth.

It is usually found that, if the glands are hard when the patient first comes under treatment, healing takes place without abscess-formation; the swelling becomes less and may often become impalpable. In certain cases, however, abscess-formation does occur during treatment.

If there is abscess-formation, not involving the overlying skin, local irradiation must be cautiously applied and aspiration of pus may be carried out as a supplementary measure to relieve tension, the needle being introduced through skin and healthy tissue to the side of the abscess. It may be that these measures will prevent involvement of the skin but in most cases it happens that pus does point through the skin; in these circumstances, the question of incision must be considered because otherwise spontaneous discharge will occur leaving an irregular sinus which is not infrequently difficult to heal, which usually gives a less satisfactory result in the appearance of the healed scar and which, judging from results in the past, is more liable to become the seat of lupoid degeneration than is an incised wound. The time of election for incision is when the skin is definitely involved by the underlying abscess but is not yet showing signs of breaking down; when that stage is reached an incision of about a quarter-of-an-inch is usually sufficient to give adequate exit to pus.

If a sinus shall have occurred, either spontaneously or through the medium of the scalpel, longer exposures of local irradiation are used to promote healing with local antiseptic dressings to minimise the chances of secondary infection.

Most cases respond favourably to this conservative treatment ; a few do not, and then treatment under hospital conditions may be advised. The outlook on the treatment of cervical adenitis has changed considerably from the days when block dissections of glands were the vogue ; indeed, it may almost be asserted now that removal of a gland is unnecessary except in isolated cases when histological examination is essential for purposes of diagnosis.

Lupus Vulgaris.—Nineteen cases of lupus, or 10·4 per cent. of the dismissals, were put off treatment in 1937. Eight cases showed exceptional improvement, 6 distinct improvement, and 5 no improvement. During 1937, in view of the fact that it was hoped at an early date to be able to use Finsen-Lomholt lamps for treatment, it became the policy to use as little caustic treatment as possible for face cases, as the inevitable scars would be inferior in appearance to those expected to be produced by the new lamps, and to use such substances as pyotropin for treatment, particularly of lesions on unexposed parts of the body ; in different patients several such patches of lupus seem to have been successfully eradicated. The local injections of phenyl-ethyl hynocarpate, mentioned in the 1936 report, were not persevered with because it was found that somewhat alarming local reactions were sometimes produced and that the good results claimed by workers elsewhere were not confirmed at this Clinic.

Abdominal Tuberculosis.—Eleven cases of abdominal tuberculosis, or 6·0 per cent. of the dismissals, ceased treatment in 1937. Of these, 5 were "healed" and 6 "improved." The patients were those in whom operation at a general hospital had revealed the disease, or those who had already received hospital treatment but to whom it was still desirable to give some ultra-violet ray treatment, if only for its general tonic effect.

Tuberculosis of Bones and Joints.—Eleven cases of this condition, or 6·0 per cent. of the dismissals, left the Clinic in 1937 ; 7 were regarded as "healed," 2 as "improved," and 2 as "not improved." With the exception of dactylitis, to be mentioned separately, cases of bone and joint tuberculosis do not usually respond well to out-patient treatment and are preferably treated in hospital.

Dactylitis.—Three cases of dactylitis were dismissed in 1937; 2 were "healed" and 1 "improved"; the improved case was approaching a satisfactory conclusion when the patient's guardian stopped bringing him for treatment.

Other Tubercular Conditions.—Six cases came under this classification, one being a case of ulceration of the legs which was finally healed by combining ultra-violet light treatment with repeated applications of "elastoplast" bandages, and five being cases of cold abscess. Of the latter, 3 were healed, of which in one the abscess had been in the interscapular region and had healed after incision, in one the abscess had been in the subcutaneous tissue of the chest wall and had healed after aspiration, and in one the abscess had been in the forearm of a patient who also had a whitlow of a digit of the same limb and in whom the abscess healed without removal of pus, although the whitlow was still present at the end of treatment at the Clinic; 2 were improved, of which in one the abscess had been under a pectoralis major muscle and had required periodical aspiration, and in one the abscess had been in the subcutaneous tissue of the chest wall and had discharged spontaneously soon after the initiation of treatment at the Clinic.

Miscellaneous.—The cases of hilum-adenitis and bronchitis were under treatment as being potential cases of tuberculosis, usually because they were in close contact with cases of pulmonary tuberculosis. With one exception, a case of lupus erythematosus of the face and scalp which showed improvement under general ultra-violet treatment and which was ultimately referred to a dermatological dispensary, the sub-group "others" was composed of cases of debility.

SECTION VI.

VENEREAL DISEASES.

By Dr. W. A. Horne.

Certain interesting points have arisen during the past year in connection with the incidence of the disease and the methods of treatment. The rise in the number of cases of acute syphilis coming for the first time to the clinics continues, the figure for *ad hoc* centres being over 30 per cent. above the figure for 1935. On the other hand, the number of new cases of acute gonorrhoea, especially among males, has decreased from 1,542 to 1,317. The incidence of soft sore has also undergone a surprising increase, there being twice as many cases in 1937 as in the previous year. A similar sudden rise occurred in 1930 and again in 1921. After the slight increase registered last year in the number of congenital syphilis cases, it is satisfactory to record a marked decrease in the figures for 1937.

The treatment of gonorrhoea with sulphanilamide was investigated by Dr. Ferguson Smith and Dr. Harvey at the Broomielaw Clinic and a short summary of their results is included. This method of treatment of acute gonorrhoea in the male marks a definite advance over previous methods and it was also found to have a beneficial effect on soft sore.

TABLE A.

NEW PATIENTS ADMITTED TO THE VARIOUS TREATMENT CENTRES
IN 1937.

OUT PATIENTS :—		Sex.	Primary Syphilis D.G. + W.R. —	Primary Syphilis W.R. +	Secondary Syphilis.	Latent Syphilis (1st year).	All Later Stages.	Congenital Syphilis.	Extra-genital Infection.	Acute Gonorrhoea.	Chronic Gonorrhoea.	Soft Chancre.	Non-Specific Venereal Infection.	Other than Venereal.	Total.	Aggregate Attendances.
<i>Ad Hoc Centres—</i>																
<i>Male—</i>																
Black Street, Broomielaw, and Bellahouston ...	M.	M.	55	129	70	8	124	12	2	1,317	103	176	611	737	3,344	110,190
<i>Female—</i>																
Baird Street and Govan ...	M.	M.	—	—	—	—	—	7	—	—	—	—	1	1	9	237
	F.	F.	1	8	36	1	47	20	2	129	15	3	113	54	429	11,998
<i>Other Centres—</i>																
Lock Hospital	M.	M.	—	—	—	—	—	11	—	—	—	—	—	3	14	228
	F.	F.	—	23	27	—	47	37	—	9	226	—	—	20	389	12,924
Western Infirmary	M.	M.	4	2	5	2	60	9	2	—	—	3	4	12	103	4,308
	F.	F.	—	4	12	4	23	5	2	15	—	1	25	11	102	5,074
Victoria Infirmary	M.	M.	1	—	—	—	15	—	—	—	—	—	—	—	16	431
	F.	F.	—	—	—	—	10	2	—	—	—	—	—	—	12	393
Eye Infirmary	M.	M.	—	—	—	—	20	13	—	—	—	—	—	—	33	3,288
	F.	F.	—	—	—	—	17	11	—	—	—	—	—	2	30	2,709
Royal Hospital for Sick Children ...	M.	M.	—	—	—	—	—	3	—	—	—	—	—	59	62	291
	F.	F.	—	—	—	—	3	2	—	—	—	—	—	38	43	1,069
<i>Ante-Natal Centres—</i>																
Maternity Hospital	M.	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	F.	F.	—	—	1	—	34	3	—	2	3	—	88	20	151	2,226
Child Welfare Clinics ...	M.	M.	—	—	—	—	—	5	—	—	—	—	—	—	5	155
	F.	F.	—	—	—	—	25	5	—	2	—	—	147	1	180	2,648
Total No. of Out-Patients ...			61	166	151	15	425	145	8	1,474	347	183	989	958	4,922	158,169
<i>IN-PATIENTS :—</i>																
Belvidere Hospital	M.	M.	—	2	4	—	—	—	—	22	3	6	2	2	41	—
Lock Hospital ...	M.	M.	—	—	—	—	—	13	—	—	—	—	—	15	28	—
	F.	F.	—	8	22	—	14	14	—	6	147	—	—	12	223	—
Other Institutions	M.	M.	—	—	—	—	7	—	—	—	—	—	—	—	7	—
	F.	F.	—	—	2	—	3	5	—	—	1	—	1	—	12	—
Total No. of In-Patients ...			—	10	28	—	24	32	—	28	151	6	3	29	311	—
Grand Total ...			61	176	179	15	449	177	8	1,502	498	189	992	987	5,233	—

The rise in cases of acute syphilis and the fall in the number of patients suffering from acute gonorrhoea will be noted, as well as the drop of about 10 per cent. in the attendances. This latter fact is largely contributed to by the sulphanilamide treatment of gonorrhoea.

which does not require the frequent attendance of the patient for lavage. The above table is summarised as follows :—

	<i>Ad Hoc</i> Treatment Centres		Glasgow : All Centres.
	Males.	Females.	
Acute Syphilis (includes Primary, Secondary, and Latent in the First Year of Infection) ...	264	48	439
Acute Gonorrhoea	1,317	129	1,502
Total Acute Venereal Disease	1,581	177	1,941
Late and Congenital Syphilis	143	67	626
Chronic Gonorrhoea	103	15	498
Total Chronic Venereal Disease	246	82	1,124
Other Diseases, including Soft Sore, Septic Balanitis, etc.	788	116	1,181
Non-Venereal	738	54	987

The Corporation Centres are shown as treating 90·6 per cent. of all acute venereal infections compared to 93·4 per cent. in 1936.

Syphilis.—The increase in cases of early syphilis has already been noted, the figures for the Corporation Centres and Hospitals being 439 as compared with 385 last year. The number of new cases attending the *ad hoc* centres is shown in the following table :—

	Males.	Females.	Total.
1930	406	46	452
1931	296	41	337
1932	268	39	307
1933	258	39	297
1934	233	36	269
1935	201	35	236
1936	248	42	290
1937	264	48	312

The position as regards acute syphilis is counterbalanced by the very favourable figures for congenital syphilis. The total new cases for 1937 is 177, which compares with 218 for 1936. The figure of 36 for cases under one year is the lowest on record as will be seen from the following table.

1922	...	...	335	1930	...	...	128
1923	...	...	269	1931	...	...	73
1924	...	...	202	1932	...	...	72
1925	...	...	211	1933	...	...	67
1926	...	...	174	1934	...	...	65
1927	...	...	119	1935	...	...	53
1928	...	...	113	1936	...	...	60
1929	...	...	154	1937	...	...	36

Gonorrhoea.—The number of new cases of both sexes of gonorrhoea reporting for treatment has decreased from 1,722 in 1936 to 1,502 in 1937, the decrease being mainly in male patients. The use of sulphanilamide marks an advance in the treatment of gonorrhoea. Prontosil, Proseptasine and Streptocide have been used in the centres but the following figures refer to an investigation into the value of Prontosil at the Broomielaw Clinic.

A random selection of 100 cases was made, approximately two-thirds acute infections and one-third cases who had had other treatment. The following table shows the result of treatment :—

	Successful.	RESULT.		Total.
		Failures.	Uncertain.	
New cases hitherto untreated	38	20	5	63
Old cases having had previous treatment	31	1	5	37

The total amount of drug given varied from 20 to 58 grammes, the usual course of treatment being four tablets each of .5 grammes four times a day for the first two days, followed by three tablets four times a day for the next two days, and two tablets four times a day for the last six days, making 52 grammes in all. Some cases reacted unfavourably with sickness and dizziness and it was later found necessary to decrease the dose given to transport drivers and electricians to prevent any danger of accidents during work. The clinical changes were surprising. The discharge cleared up in two days, with rapid disappearance of the organism. Where a marked improvement was not obtained within the third day, the cases were regarded as unlikely to benefit by further treatment. The incidence of complications was slightly less than is usually found with treatment by lavage.

Further investigations are proceeding into the value of other brands of sulphanilamide, including a recent product not yet on the market which bids fair to be the ideal treatment for acute gonorrhoea.

In-Patient Treatment.—Table B shows admissions of patients to the hospitals of the Local Authority and elsewhere for the treatment of venereal diseases :—

TABLE B.

SHOWING TOTAL NUMBER OF PATIENTS ADMITTED FOR IN-PATIENT TREATMENT.

	Sex.	Primary Syphilis D.G. + W.R. —	Primary Syphilis W.R. +	Secondary Syphilis.	Latent Syphilis. (1st year).	All Later Stages.	Congenital Syphilis.	Extra-genital Infection.	Acute Gonorrhoea.	Chronic Gonorrhoea.	Soft Chancre.	Non-Specific Venereal Infection.	Other than Venereal.	Total Admissions.	Aggregate Days' Residence.	Average Days' Residence.
elvidere Hospital...	M.	3	15	11	1	3	—	—	85	5	44	9	2	178	5,998	33·7
aird Street	M.	—	—	1	—	—	3	—	—	—	—	—	—	4	51	12·8
	F.	1	5	6	—	6	3	1	23	3	1	1	1	51	2,414	47·3
ock Hospital	M.	—	—	—	—	—	16	—	—	—	—	—	15	31	3,422	110·4
	F.	—	20	30	—	22	20	—	8	208	—	—	12	320	16,046	50·1
ther Hospitals	M.	—	—	—	—	12	9	—	—	—	—	—	—	21	763	36·3
	F.	—	—	2	—	5	14	—	—	1	—	1	—	23	783	34·0
Totals	...	4	40	50	1	48	65	1	116	217	45	11	30	628	29,477	46·9

There has been a slight decrease in the number of admissions to all the hospitals.

Age Incidence.—Table C shows the age incidence of cases suffering from the various infections. The most notable feature is the fall in the number of cases of congenital syphilis at all ages and especially under one year.

TABLE C.

AGE INCIDENCE OF NEW CASES, 1937.

		—1	—5	—15	—20	—25	—35	+35	Total.
Syphilis	Primary, D.G. + W.R. —	—	—	—	3	6	30	22	61
	Primary, W.R. +	...	—	—	7	32	73	64	176
	Secondary	...	—	—	2	7	40	50	179
	Latent (1st Year)	...	—	—	—	4	9	2	15
	All Later Stages	...	—	—	1	6	31	104	449
	Congenital	...	36	12	30	29	24	36	177
	Extra-Genital	...	—	—	—	—	3	4	8
Gonorrhoea	Acute	...	3	8	13	47	343	697	391
	Chronic	...	1	—	10	105	114	167	498
Soft Chancre	...	...	—	—	—	4	26	76	83
Non-Specific Venereal Infection	...	...	2	3	4	49	270	437	227
Other than Venereal	...	...	79	31	31	38	147	378	283
Totals	...	...	121	54	91	295	1,040	2,091	5,233

Attendance of Patients and Defaulting from Treatment.—The continued disregard by a considerable number of patients of the necessity to remain under treatment until declared cured is still responsible for much wasted effort. This is especially so in the case of syphilis where the period of treatment and observation extends over several years.

The following table shows the amount of arsenical treatment given to cases of early syphilis who have been dismissed as cured or who have defaulted during the year.

Less than One Course of "914" ...	...	...	...	80
One Course ...	...	...	...	91
Two Courses ...	...	...	...	45
Three Courses ...	...	...	...	20
Four or more Courses ...	...	...	...	11
Total ...	...	...	...	247

The standard course consists of 5.85 grams of neoarsphenamine, together with 2.0 grams of bismuth metal.

Table D shows the number of defaulters and dismissals during 1937.

TABLE D.

SHOWING NUMBER OF DEFAULTERS AND DISMISSALS DURING 1937.

	Syphilis.		Gonorrhoea.		Soft Chancre.		Non-Specific Venereal Infections.		Conditions other than Venereal.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Number of cases which at the commencement of the year, were under treatment or observation for ...	1,518	1,132	743	425	27	—	116	130	22	12	2,426	1,69
Transfers from other Centres ...	136	117	177	151	46	—	20	4	6	1	385	27
Defaulters returning	41	64	21	12	3	—	6	14	—	—	71	9
Cases in which treatment or observation was commenced during the year ...	585	480	1,445	555	185	4	618	374	829	158	3,662	1,5
Totals ...	2,280	1,793	2,386	1,143	261	4	760	522	857	171	6,544	3,6

	Syphilis.		Gonorrhoea.		Soft Chancre.		Non-Specific Venereal Infections.		Conditions other than Venereal.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Number of cases which ceased to attend the Centre :—												
(a) before completing a course of treatment	386	239	491	63	50	1	226	122	—	—	1,153	425
(b) after completing a course of treatment but before final tests as to cure	203	83	388	32	37	—	69	34	—	—	697	149
Number of cases transferred to other Treatment Centres or to care of private practitioners after treatment	216	315	332	318	66	—	49	8	—	—	663	641
Number of cases discharged from the Centre after completion of treatment and observation	20	31	696	331	68	1	305	212	—	—	1,089	575
Number of cases in which death occurred from whatever cause, during treatment	14	8	1	2	—	—	1	—	—	—	16	10
Number of cases which, at the end of the year, were under treatment or observation	1,441	1,117	478	397	40	2	110	146	24	16	2,093	1,678
Totals	2,280	1,793	2,386	1,143	261	4	760	522	24	16	5,711	3,478

Incidence of Jaundice during Treatment.—Observations were made during the year on the incidence of jaundice in new cases under treatment for syphilis at Black Street Centre. The group comprised 134 early and 35 late cases, making 169 in all. Of the acute patients 21·6 per cent. developed jaundice of varying severity, while the figure in the late cases was 5·7 per cent. In most patients the jaundice appeared between the ninth and sixteenth week of treatment and after five grammes of neoarsphenamine had been injected. Change to another brand of arsenical failed to alter the incidence of the jaundice.

Issue of Salvarsan Substitutes to Medical Practitioners.—Forty-five practitioners received free supplies of salvarsan substitutes for the treatment of private patients. The total number of doses issued was 1,466 compared with 1,300 in 1936.

Report of the Nurse Almoner.—The nurse almoner paid 400 domiciliary visits during the year to 231 patients. In addition, 20 visits were paid in connection with sociological matters arising out of the Venereal Diseases Scheme. As the result of these visits, 188 patients resumed attendance at the Clinic.

SECTION VII.

PORT LOCAL AUTHORITY.

The constitution of the Port Local Authority is laid down in the Order of the Local Government Board for Scotland, constituting the Local Authority of the Burgh of Glasgow, in terms of the Public Health (Scotland) Act, 1897, the Port Local Authority of the Port of Glasgow. Article III is as follows:—

“The jurisdiction of the said Port Local Authority shall, subject to the exceptions hereinafter in this article mentioned, extend to the whole of the said Port of Glasgow as defined by the Treasury Warrant, dated 19th April, 1859, and to the place or places for the time being appointed as the Customs Boarding Station or Stations for the said Port; and the place for the time being appointed for the mooring or anchoring of ships for the said Port, under any Regulation for the prevention of the spread of diseases, issued under Part IV of the Public Health (Scotland) Act, 1897, and to all waters, harbours, and strands belonging to the said Port, etc.”

The duties of a Port Local Authority are laid down in the Public Health (Scotland) Act, 1897, and in the Port Sanitary Regulations (Scotland), 1933, made by the Department of Health for Scotland.

The Port staff now consists of a Port Medical Officer and a Supervising Inspector, five Inspectors for food inspection, infectious diseases, and nuisances, three Inspectors at Greenock Boarding Station, and five Rat Catchers, Searchers, and Fumigators.

ASSOCIATION OF PORT HEALTH AUTHORITIES OF THE BRITISH ISLES.

Annual Conference.—The Annual Conference of the Association was held in Glasgow in June, under the Presidency of Bailie James Crawford. The following papers were submitted:—“Insect Pests on Ships,” by Dr. William C. Gunn of the Public Health Department; “Accommodation for Ships’ Crews,” by Professor Percy A. Hillhouse, D.Sc., M.I.N.A., Professor of Naval Architecture, Glasgow University; “Trade in Foodstuffs at the Port of Glasgow,” by John Wilson, Esq., General Manager and Secretary of the Clyde Navigation Trust.

Boarding Station, Greenock.—All vessels are boarded in conjunction with H.M. Customs from a motor launch which is hired on a yearly contract. The co-operation existing between H.M. Customs and the officers of this Department in the administration of the Port Sanitary Regulations has been most cordial. Despite the weather, this most important service has been maintained without the slightest interruption during the past year.

Summary of Work during the Year 1937.—There were 1,624 arrivals from foreign ports and 572 from the Irish Free State, a total of 2,196 ships. Of the vessels from foreign ports, 572 came from or called at infected ports, 218 direct and 354 via a home port, the remaining 1,052 being from non-infected ports. The tonnage of the 1,624 ships from foreign ports was 5,034,602 tons, as compared with 4,928,356 tons for the 1,564 ships during the year 1936.

Trade of the Port.—The trade of the Port in common with other British ports is world-wide. There is also a regular passenger traffic from the Port to Canada, the United States of America, etc.

The following table gives the countries outwith the British Isles with which the Port has its principal trade, and shows the nature of the imports and exports:—

	Ports.	Imports.	Exports.
U.S.A.	Corn, grain and other farinaceous substances, provisions, fruit, timber, sewing-machines, tobacco, and all kinds of machinery, &c.	Manufactured cottons, leather oilcloth, herrings, machinery, sanitary ware, spirits, and other sundries.
Canadian	Corn, grain and other farinaceous substances, provisions, fruit, timber, &c.	Textiles, machinery, chemicals, spirits, herring, oilcloth, &c.
Indian	Rice, beans, peas, tea, timber, cocoanuts, hemp, oils, linseed, myrabolams, manganese ore, &c.	Textile goods, machinery, spirits, paints, provisions and manufactured goods.
French	Brandies, wines, canned and dried fruits, vegetables and oils.	Machinery, chemicals, oils, coal and coal products, and other sundries.
German	Chemicals, hardware, provisions, and manufactured goods (jewellery, toys, leather, &c.)	Cottons, fish, leather, grease, coal and machinery.
Australian and New Zealand.		Grain, provisions (frozen meat, butter, &c.), skins, apples, eggs, flour, canned and dried fruits, &c.).	Textile goods, machinery, paints, chemicals, spirits, hardware and sundries.
Spanish	Ores, fruits, sulphur, vegetables and wines.	Coal, machinery, chemicals and other sundries.
Norwegian	Paper pulp, timber and canned fish.	Coal, sewing-machine parts, cottons and manufactured goods.
South American	Grain, frozen and canned meats, nitrates, hides and fats.	Machinery, cottons, iron piping, chemicals, paints, fireclay, bricks, spirits and manufactured goods.
Swedish	Paper pulp, wood, matches, &c.	Coal, machinery and textiles.
Belgian	Iron bars, cement, manufactured articles (baskets, brushes, pails, &c.), lard, canned vegetables and glass.	Machinery, cottons, oils and other goods.

Ports.	Imports	Exports.
African, North ...	Iron ore, esparto grass and fibre.	Textiles, machinery, iron tubes and piping.
African, South ...	Grain and fruits (fresh and canned), wool, tobacco, &c.	Chemicals, paints, spirits, coal and other sundries.
Grecian ...	Dried fruits and ore ...	Coal, machinery, cottons, paints and manufactured goods.
Japanese and Chinese.	Peas, oils and manufactured goods, eggs (liquid and frozen), ginger.	Machinery, cotton goods, chemicals, oils, &c.

The following table shows the number and nationality of the overseas vessels which arrived at the Port of Glasgow during 1937 as compared with 1936:—

Nationality.	Number of Vessels.		Number of Crew.	
	1936.	1937.	1936.	1937.
American ...	40	54	1,434	1,952
British ...	1,226	1,225	77,951	79,465
Belgian ...	2	1	71	49
Danish ...	40	36	769	747
Dutch ...	26	50	510	859
Esthonian ...	5	9	95	173
Finnish ...	16	26	403	616
French ...	1	3	23	122
German ...	6	21	117	437
Greek ...	14	14	424	403
Icelandic ...	5	6	141	172
Italian ...	2	3	59	78
Japanese ...	11	9	746	606
Jugo-Slav ...	1	3	31	93
Latvian ...	5	1	93	17
Norwegian ...	95	115	2,216	2,865
Panamanian ...	1	5	38	186
Russian ...	16	8	604	292
Spanish ...	39	8	1,209	269
Swedish ...	13	27	263	546
	1,564	1,624	87,197	89,947

The above table does not include vessels arriving from the Irish Free State ports. The number of ships which arrived from Free State ports, viz., Dublin, Limerick, Wicklow, Sligo, Waterford, Buncrana, Dundalk, Cork, etc., from 1st January to 31st December, 1937, was 572, all of which were boarded by officers of the Port Local Authority, either at Greenock or Glasgow. These vessels are dealt with in the same manner as ships from overseas ports with regard to health and cargoes.

NUMBER OF SHIPS FROM FOREIGN PORTS AND IRISH FREE STATE DURING THE YEAR 1937.

Month.	FROM INFECTED PORTS.						From Non-infected Ports (direct and coastwise).						Total from Foreign Ports.		From Irish Free State Ports.	
	Class A (direct).			Class B (coastwise).			Total of A and B			Ships.			Ships.			
	Ships.	Crews.	Pass.	Ships.	Crews.	Pass.	Ships.	Crews.	Pass.	Ships.	Crews.	Pass.	Ships.	Crews.		Pass.
January	18	1,117	1	32	2,760	103	50	3,877	104	89	3,239	1	139	7,116	105	39
February	13	469	7	31	2,079	186	44	2,548	193	72	2,724	7	116	5,272	200	39
March	21	1,117	11	27	2,146	291	48	3,263	302	81	2,826	—	129	6,089	302	50
April	17	990	132	36	4,158	391	53	5,148	523	62	1,900	2	115	7,048	525	44
May	17	1,408	707	24	2,116	358	41	3,524	1,065	103	4,121	422	144	7,645	1,487	49
June	22	1,944	1,267	17	2,100	723	39	4,044	1,990	103	4,179	625	142	8,223	2,615	46
July	20	1,344	903	30	3,377	1,732	50	4,721	2,635	91	4,054	1,586	141	8,775	4,221	58
August	21	1,678	583	37	4,298	1,189	58	5,976	1,772	87	4,341	1,623	145	10,317	3,395	59
September	18	1,751	424	24	2,096	294	42	3,847	718	93	3,374	466	135	7,221	1,184	47
October	18	1,415	399	31	2,769	325	49	4,184	724	80	3,321	246	129	7,505	970	60
November	15	902	1	33	3,118	115	48	4,020	116	97	4,030	305	145	8,050	421	44
December	18	899	6	32	2,121	95	50	3,020	101	94	3,666	496	144	6,686	597	37
Totals	218	15,034	4,441	354	33,138	5,802	572	48,172	10,243	1,052	41,775	5,779	1,624	89,947	16,022	572
1936	192	13,892	4,426	293	23,592	2,665	485	37,484	7,091	1,079	49,713	7,408	1,564	87,197	14,499	583

It will be observed that the number of ships arriving direct from infected ports has increased, 218 as against 192 in the previous year. There was a slight increase, from 321 to 354 ships, in this category coming coastwise. With regard to the nationality of ships, British numbered 1,225 in 1937, as against 1,226 in the preceding year. There were fewer Spanish, German, Swedish and Italian ships, but more from Holland, Norway, Denmark, Greece and Russia, as well as from Australia and New Zealand.

Infectious Diseases.—The total number of cases of infectious diseases and other illnesses which occurred on board vessels arriving at Glasgow was 287, compared with 213 during the preceding year. The cases dealt with at other ports numbered 125, so that the remaining 162 were found on arrival. There was no case coming within the group included in the Cholera, Yellow Fever, Etc., Order. Apart from 27 cases of illness of a non-infectious nature and the 49 cases of influenza, the largest group of cases dealt with was 10 of pneumonia, nine of which were removed to hospital, and 11 cases of measles, of which three were removed to hospital and eight allowed to go home. There were also five cases of enteric fever, four being removed to hospital and one sent home.

	Total No. of Cases.	Cases dealt with in other Ports.	Cases found on Arrival.	Cases sent to Hospital in Glasgow.	Cases sent Home.	Deaths.
Enteric Fever	8	3	5	4	1	—
Smallpox	1	1	—	—	—	—
Diphtheria	4	—	4	4	—	—
Scarlet Fever	—	—	—	—	—	—
Measles	28	17	11	3	8	—
Whooping Cough	4	4	—	—	—	—
Chickenpox	8	6	2	1	1	—
Cerebrospinal Fever	2	1	1	1	—	—
Phthisis	6	3	3	1	2	—
Venereal	68	30	38	3	35	—
Malaria	12	7	5	2	3	—
Mumps	1	1	—	—	—	—
Pneumonia	15	5	10	9	1	3
Dysentery	3	1	2	1	1	—
Influenza	54	5	49	2	47	—
Tonsilitis	4	1	3	1	2	—
Simple Bubo	1	1	—	—	—	—
Trachoma	1	—	1	—	1	—
Other Illness	66	39	27	12	15	13
Accidents	1	—	1	1	—	—
	287	125	162	45	117	16
1936	213	110	103	33	70	10

Typhoid Fever.—A ship arrived at Glasgow on 9th December, 1937, from Beira, via Freetown, with a cargo of grain and a crew of 33, two members of which had been transferred to hospital at Freetown on 21st November, 1937, suffering from typhoid fever, having sickened on 3rd and 20th November, respectively. The various members of the crew were in good health, with the exception of the Chief Officer who had apparently been ill before the ship reached Freetown. Eighteen of the crew were paid off on 10th December. The addresses to which the men proceeded were intimated to the Medical Officers of Health of the respective districts.

The quarters occupied by the two patients referred to, as well as the latrine accommodation, were disinfected. A sample of drinking water from the ship's tanks was obtained for bacteriological examination. It was reported to be unfit for consumption. Intimation was at once served on the Master to have the ship's tanks cleansed and cement washed and refilled from shore. The ship's stores consisting of canned meats, flour, bacon, etc., were examined and found to be sound.

On 24th December the Medical Officer of Health, Hull, reported that a galley-boy who had been notified to him as a contact had been removed to hospital suffering from typhoid fever. Thereupon specimens of faeces and urine were taken from all members of the crew remaining on board; a negative result was obtained in every instance.

Diphtheria and Enteric Fever.—On 25th November, 1937, a ship arrived from Bilbao with a cargo of iron ore. No sickness was reported on arrival, but on the 29th November one of the crew was found to be ill. He was subsequently removed to hospital suffering from diphtheria and enteric fever. Disinfection of clothing and quarters was carried out prior to sailing, and as the ship left immediately on completion of disinfection the Medical Officer of the outwith port was duly notified.

Venereal Disease.—All Masters or Chief Officers of vessels entering the Port are diplomatically approached as to the existence of venereal disease amongst the personnel of the ship. Ratings suffering from this disease are advised to attend the most suitable Corporation clinic for proper treatment, and a leaflet showing addresses of the clinics and hours of attendance is given to the person concerned. When the course of treatment is incomplete he is advised at the clinic to attend for further treatment at his next port of call.

During the year 320 merchant servicemen attended the clinic for venereal diseases at Broomielaw. The disease and numbers are as shown:—Gonorrhœa, 148; Syphilis, 69; Chancroid, 23; Non-specific, 41; Non-venereal, 39; Total, 320.

MEDICAL INSPECTION OF ALIENS.

The Aliens Order, which came into force on 1st September, 1919, governs the landing of aliens in the United Kingdom at approved ports and the inspection of said aliens by the Immigration Officer and Medical Inspector. The examination of aliens by the Medical Inspector and Immigration Officer is made concurrently as far as practicable, and these examinations as a rule are made on board ship. When an alien has to undergo special medical examination this can be done on shore, at a hospital or at the Public Health Office.

During the year 94 ships with alien passengers arrived at Glasgow. The number of aliens was 4,225 non-transmigrants, and four transmigrants. Of these, 646 were medically examined, 636 on 37 ships from U.S.A., and 10 on three ships from Canada. Three medical certificates were issued for the following reasons:—pulmonary fibrosis, mental deficiency and “conditional landing.”

RETURN OF ALIEN PASSENGERS ARRIVING IN GLASGOW DURING 1937.

			Non- Transmigrants.	Transmigrants.	Total.
American	...	...	4,046	2	4,048
European	...	...	136	2	138
Asiatic	...	...	43	—	43
			4,225	4	4,229

Emigrants.—During the year 142 ships carrying emigrants left the Clyde. Of these, 58 sailed for America, a decrease of seven, and 84 sailed for Canada, a decrease of three, compared with the preceding year. Passenger ships sailing from the Clyde for Australia and New Zealand embark passengers at Liverpool.

The following is a return of emigrants and ships which left Glasgow during 1937:—

Country.		Ships.	British Subjects.	Other Nationalities.	Total.
America	...	58	4,604	4,764	9,368
Canada	...	84	7,405	1,022	8,427
Total	...	142	12,009	5,786	17,795
Total, 1936		152	9,942	2,350	12,292

PARROTS (PROHIBITION OF IMPORT) REGULATIONS (SCOTLAND), 1930.

During the year 18 ships arrived with 33 birds—eight parrots and 25 lovebirds—which were dealt with under the Regulations. One lovebird died and was destroyed in the ship's furnace, and permission was granted for the landing of one which had been purchased in this country and which, although it had been across the western ocean and on various voyages, had never been landed at any port outside the British Isles. The other 23 lovebirds and the eight parrots were re-exported.

RAT DESTRUCTION.

The fact that plague may exist in rats and can be transmitted by them to human beings renders it necessary that ships arriving from infected or suspected ports should be under constant supervision while the vessels are in port. If the ship is unprotected while in dock and during discharge of cargo the rats may find their way ashore and establish themselves in premises providing suitable harbourage. The preventive methods of rat extermination employed at the docks are fumigation by poisonous and suffocating gases and intensive trapping. This latter method is resorted to not only on ships but in stores and other premises in or adjacent to the harbour. The Port Authority has a staff of rat catchers specially trained and constantly employed in searching ships. They form an estimate of the rat prevalence from a search of the ships' holds, store rooms, crew's quarters, etc., for excreta, nests, runs, gnawing or damage to cargo.

All vessels from plague infected or suspected ports are visited on arrival. These ships are kept under surveillance from the time of arrival until the cargo has been discharged. The Master or Officer in Charge is requested to affix rat-guards on all mooring ropes and to take other preventive measures which may be considered necessary to prevent the passage of ship's rats to the shore. Traps are set and specimens caught are submitted forthwith to the City Bacteriologist for immediate report as to the presence of plague or otherwise.

INTERNATIONAL SANITARY CONVENTION OF PARIS, 1926.

Article 28 of the Convention requires that all ships, except those engaged in national coastal service, shall be periodically deratised or be permanently so maintained that the rat population is kept

at a minimum. In the first case they shall receive a Deratisation Certificate, and in the second a Deratisation Exemption Certificate. These certificates can only be issued by Health Authorities of ports approved by their respective Governments and are valid in each case for a period of six months, but this period may be extended for one month when the ship is proceeding to her home port. To conform with Article 28 the Master of a foreign-going vessel must on arrival at an Approved Port in the United Kingdom produce a Deratisation or a Deratisation Exemption Certificate. These certificates can only be issued at an Approved Port, and Glasgow being approved for this purpose is authorised to issue these certificates.

Deratisation Certificates.—This certificate is granted after the ship has been deratised by an approved fumigant such as hydrogen cyanic gas, Salforkose, or SO_2 . Such a certificate may also be granted after deratisation by trapping or poisoning. As neither of these methods is altogether efficient they are only used under exceptional circumstances, such as when the infestation is confined to a specified compartment or because the compartment cannot be fumigated owing to its construction.

Deratisation Exemption Certificates.—These Certificates of Exemption are only granted on evidence produced by the searcher and confirmed by the inspector that there are not any rats aboard and that the ship is so maintained that the rat population is kept at a minimum.

The work of issuing certificates in accordance with the Convention was carried out during the year under the provisions contained in the Port Sanitary (Scotland) Regulations, 1933. For the purpose of providing a Deratisation or a Deratisation Exemption Certificate 515 ships were inspected. The following table shows the number and classification of the certificates granted:—

	Deratisation.				Exemption.	Total.
	Salforkose	SO_2	HCN.	Trapping.		
From Infected Ports ...	—	24	89	1	248	362
From Non-Infected Ports ...	—	9	10	—	134	153
	—	33	99	1	382	515

Of the 382 Deratisation Exemption Certificates, 30 were issued to new vessels sailing on their maiden voyage.

During the year 1,032 rats were caught in sheds, stores and other premises. The different sex and species are shown in the following table:—

Brown Rat.		Black Rat.						Total.	To Labora- tory.	Result.
R. Norvegicus		R. Rattus.		R. Alexandrinus.		R. Frugivorus.				
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.			
268	146	122	96	175	116	65	44	1,032	430	Negative

Deratisation.—One hundred and thirty-three ships were deratised during the year—33 by SO², 99 by HCN, and one by trapping. The following table shows the number of rats, their species and sex, recovered:—

HCN.												Total.	To Labora- tory	Result
Infected Ports.						Non-Infected Ports								
R.A.		R.R.		R.F.		R.A.		R.R.		R.F.				
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
211	136	411	287	239	168	11	10	8	3	2	—	1,486	17	Neg.
SO ²												1,066 <th rowspan="5"><th rowspan="5"></th></th>	<th rowspan="5"></th>	
Infected Ports						Non-Infected Ports								
R.A.		R.R.		R.F.		R.A.		R.R.		R.F.				
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
187	137	236	185	99	80	64	45	20	13	—	—			
Trapping.												3 <th rowspan="5">1<th rowspan="5">Neg.</th></th>	1 <th rowspan="5">Neg.</th>	Neg.
Infected Ports						Non-Infected Ports								
R.A.		R.R.		R.F.		R.A.		R.R.		R.F.				
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
—	—	2	1	—	—	—	—	—	—	—	—			
398	273	649	473	338	248	75	55	28	16	2	—	2,555	25	Neg.

R.A. = Rattus Alexandrinus.

R.R. = Rattus Rattus.

R.F. = Rattus Frugivorus.

Total number of vessels subjected to measures of rat destruction during the year:—

No. of vessels subjected to measures of rat destruction.	"A"					
	On Ships.		On Shore.		No. of Rats found infected with Plague	
	*No. of dead rats recovered.	No. of Rats examined bacteriologically.	*No. of Rats destroyed (other than on ships).	No. of Rats examined bacteriologically.	on ships.	on shore.
133	2,555	25	1,032	430	None	None

*Species of rats recovered:—

(a) On ships: *Rattus Rattus*, *Alexandrinus*, *Frugivorous*.

(b) On shore: *Rattus Norvegicus*, *Alexandrinus*, *Frugivorous*, and *Rattus Rattus*.

"B"

No. of vessels fumigated by SO ₂	No. of dead rats recovered.	No. of vessels fumigated by HCN.	No. of dead rats recovered.	No. of vessels in which poisoning, etc., was employed. Trappings, &c.	No. of dead rats recovered.	No. of Deratisation Certificates issued.	No. of Deratisation Exemption Certificates issued.
33	1,066	99	1,486	1	3	133	382

In addition to the number of rats shown in Tables "A" and "B," 487 were trapped on vessels not requiring certificates. The number of rats caught or destroyed on board ships and ashore during the year totalled 4,077. Of this total, 581 were submitted to the City Bacteriologist with negative result.

The total number of rats caught by trapping on ships, in sheds, and in premises adjoining the docks, and recovered after fumigation are classified in the following table:—

Year.	Brown Rat.	Black Rat.			Total.
	Rattus Norvegicus.	Rattus Rattus.	Rattus Alexandrinus.	Rattus Frugivorous.	
1937	414	1,663	1,223	774	4,074
1936	425	2,295	1,244	1,307	5,271

NUISANCES ON SHIPBOARD.

Inspections and re-inspections to the number of 2,548 of vessels in harbour were made during the year. The visits to oversea steamers numbered 1,624, and the re-visits 557. In oversea sailing vessels, two inspections were made and two re-visits, while 321 coasting steamers and two sailing craft were examined, re-visits being paid to 35 of the former and two of the latter. Five hundred and eighty-nine verbal warnings were given to Masters where nuisances of a minor nature were found, and 86 intimations and

eight notices (under the Public Health Act) were served where defects existed. Three hundred and twenty-nine verbal instructions were given and 165 notices served on Masters of vessels *re* locking-up of water-closet accommodation while vessels were in port.

The nuisances discovered numbered 3,124—in forecastles, rooms, etc., 753; and water-closets, wash-houses, etc., 803; while structural defects were found in 785 instances—575 within crews' quarters and 210 in water-closet and lavatory compartments. General complaints were recorded in 783 instances.

Sanitary Defects and Nuisances.—The following table shows the nuisances found on board vessels arriving in the harbour:—

ARISING FROM STRUCTURAL DEFECTS.

<i>Forecastles, Rooms, &c.—</i>	1934.	1935.	1936.	1937.
Overhead decks leaking	67	78	104	77
Ports defective	162	165	156	160
Skylights out of repair	7	8	34	30
Without scupper-pipe or same cemented ...	3	4	10	7
Ventilators plugged, out of repair, or unshipped	4	7	19	5
Without bogies or funnels, or such out of repair	8	17	20	18
Inadequately lighted or ventilated	12	16	43	51
Radiators or steam-pipes defective	32	37	55	30
Doors to forepeak and forecastle broken ...	3	4	4	5
Ship's sides leaking	2	3	6	4
Anchor chain exposed by sheathing being out of repair	1	2	12	9
Doors of food lockers and seats out of repair	134	114	117	77
Requiring wood sheathing or cork-spraying for "sweat"	4	11	40	21
Hawse pipes defective	3	4	6	7
Floors broken and out of repair	36	40	56	50
Bulkhead between forecastle and W.C. compartment broken	1	3	2	17
Scuppers required	2	3	4	3
Waste pipe leaking	5	7	10	4
	486	523	698	575

<i>Water-closets, Urinals, Washhouses, &c.—</i>	1934.	1935.	1936.	1937.
Flushing apparatus, basins or discharge pipes defective	31	65	106	53
New water-closet required	21	25	28	20
Ports defective	7	6	12	18
Floor and woodwork out of repair	5	4	6	13
Doors broken and new locks required (w.c.'s must be locked while ship is in harbour)	43	46	50	51
Ventilators plugged	7	5	8	9
Woodwork of w.c. basin broken	40	45	59	21
Compartments defective in light and ventilation	10	13	22	25
	164	209	291	210

ARISING FROM MISUSE.

<i>Forecastles, Rooms, &c.—</i>	1934.	1935.	1936.	1937.
Alleyways and companionways dirty ...	144	146	149	89
Floors, mat coverings, ceilings, woodwork, &c., dirty ...	179	214	197	205
Interior of ships' sides or woodwork dirty (to be limewashed or repainted) ...	181	222	196	215
Galleys dirty ...	33	39	58	20
Tables and benches dirty ...	212	196	187	188
Scuppers choked (water lying stagnant) ...	39	45	61	11
Bunks dirty ...	43	52	46	25
	831	914	894	753
<i>Water-closets, Washhouses, &c.—</i>	1934.	1935.	1936.	1937.
Floors, ceilings, and woodwork dirty ...	132	148	130	200
Basins, hoppers, or troughs fouled, corroded, or choked ...	125	158	178	235
Scuppers choked ...	49	60	55	54
Wash-house dirty ...	12	14	31	51
Interior requiring limewashing or repainting	99	118	108	249
Waste-pipe defective ...	6	10	34	14
	423	508	536	803

GENERAL NUISANCES.

	1934.	1935.	1936.	1937.
Food lockers dirty ...	198	162	155	160
Bilges (hold) dirty ...	62	86	115	54
Gear and foodstuffs stored in sleeping compartments ...	29	40	53	26
Drinking-water tanks dirty and in need of re-cementing ...	87	109	132	82
Drinking-water tanks out of repair or uncovered ...	1	5	9	5
Accumulation of rubbish in fore-castle or on deck ...	103	155	83	28
Fore-castle infested with vermin ...	158	234	348	366
Bedding dirty or verminous ...	50	75	44	62
Bilges ventilating into fore-castle ...	—	1	2	—
	688	867	941	783

The following table shows the number of oversea and coastwise ships inspected in the harbour during the years 1935-37:—

	Inspections.			Re-inspections.		
	1935.	1936.	1937.	1935.	1936.	1937.
Oversea Steam ...	1,506	1,560	1,622	650	624	551
„ Sail ...	4	4	2	12	9	2
Coast Steam ...	294	322	321	55	45	35
„ Sail ...	18	9	9	11	7	4
Intimations ...	...	...	...	112	106	86
Warnings ...	...	...	...	276	600	589
Notices ...	...	...	...	5	7	8
Letters to other Port Authorities ...	...	...	...	62	72	75
<i>Nuisances—</i>						
Functional ...	...	...	...	1,422	1,430	1,556
Structural ...	...	...	...	732	989	785
General ...	...	...	...	867	941	783

Of the total arrivals 1,225 were British and 399 vessels sailed under foreign flags, the latter including 19 different nationalities.

Rags, Hair, Hides and Bones.—The following table shows the importation of rags, hair, hides and bones, with source of origin and number of shipments:—

Source of Origin.	No. of Ships.	Rags, Bdles.	No. of Ships.	Hair (various). Bdles.	No. of Ships.	Hides (various). Bdles.	No. of Ships.	Bones. Bags.
Europe	45	674	20	1,190	78	18,473	—	—
Canada	—	—	2	286	4	122	—	—
United States ...	8	355	33	7,575	12	2,121	—	—
South America ...	—	—	15	271	6	7,984	5	478
Australia & N. Zealand	—	—	—	—	39	10,538	—	—
India	—	—	—	—	36	1,394	15	3,868
South Africa ...	—	—	—	—	3	127	1	83
Japan	9	310	—	—	—	—	—	—
Egypt	1	219	—	—	—	—	—	—

In addition to the foregoing, a considerable quantity of rags is imported from Irish Free State ports.

Anthrax.—Goatskin thongs continue to be used in a much lesser degree as bindings for orange boxes from various ports in Spain. It has been noticed also that in the few instances where thongs are used they are hairless. Samples of imported hides have been examined by the Bacteriologist for the presence of the anthrax bacillus with negative results.

Bug Infestation on Ships.—Inspection of 2,526 ships at the Port during the year revealed the fact that some 366 showed variable degrees of bug infestation. Fifty-seven Intimations in terms of the Public Health (Scotland) Act, 1897, were served on the Masters or owners, and 282 warnings were given in the case of the remainder. Pamphlets relating to Prevention of Bug Infestation and Methods of Extermination were served on the Master or officer in charge of the ship in each instance. While most of the infested quarters were subjected to a reliable fumigant, such as HCN, SO₂, etc., the responsible officer on the ship was reminded of the fact that fumigation alone is only a palliative, and in order to secure complete extermination of the bug and its egg rigorous inspection not only of the quarters but of the crew's personal effects, particularly in the case of native seamen whose worldly effects are contained in large boxes, must be carried out. This, combined with periodic fumigation and general cleanliness, is most essential.

Although some contact insecticide sprays are very useful in combating infestation by the bed bug, experience has proved that fumigation and re-fumigation are much to be preferred. This method of periodic fumigation, if properly carried out, will obviate the necessity of stripping woodwork from infected quarters and the expense of renewal by the shipping companies.

HYGIENE IN CREW SPACES.

Observations made at the Port of Glasgow with regard to the situation, construction, ventilation, lighting, heating, etc., of crew spaces, the provision of separate accommodation, such as mess rooms, drying rooms, wash-places, water-closets and urinals, and the general cleanliness and hygienic condition of these spaces show a decided improvement from past years. It is gratifying to note in regard to the situation of crew's spaces that present-day shipbuilders favour the plan of utilising the entire aft poop space for crew accommodation instead of the forecastle space, which in former years was considered the only space available, cargo space being the first consideration. The poop space is much more suitable for the housing of crews and provides large, airy and roomy quarters. In some quarters the dividing up of the crew space into two-berth rooms is favoured on grounds of privacy as against one large open space for each section of the crew. Much diversity of opinion as to which is better exists, although the matter is not so important as the amount of air space per man, the provision of adequate ventilation, lighting and heating.

The Board of Trade have now issued a revised "Instructions as to the Survey of Masters and Crew Spaces, 1937." These Instructions, which came into force during the latter part of the year, have been approved by the Merchant Shipping Advisory Committee and others concerned. The new Instructions are based on modern standards, and in many respects the advance as compared with the Instructions is most striking. Amongst the improvements which have been made are the provision of separate accommodation for different ratings; improvement in the equipment of sleeping rooms; the provision and equipment of mess rooms; adequate provision of wash-places, bathrooms, drying rooms and privy accommodation; provision of hospital facilities on all foreign-going ships over 2,500 tons; and improved lighting, ventilation and heating.

The Instructions also emphasise the fact that it is the duty of the Master of a ship to satisfy himself by frequent and regular inspection that the crew's quarters are maintained in a proper condition and that the said quarters are cleansed daily and every effort made to detect the presence of vermin and to deal with the same immediately. He should also satisfy himself that lockers and other fittings are washed and disinfected where necessary and that when the crew's quarters are being cleansed the men should be encouraged to air their bedding on the open deck. If this duty is carried out as stated in Paragraph 30 of the Instructions, not only will it lead to greater co-operation between ships' officers and crews, but it will reduce to a minimum the number of notices issued and verbal warnings given by the Port Health Officers with respect to the insanitary condition of crew spaces.

UNSOUND FOOD REGULATIONS.

The following table shows the character and quantity of the foodstuffs imported direct during 1937 (but does not include coast-wise or transhipped cargoes), a percentage of which was examined by the food inspectors before removal:—

Article.			Weight. Tons Cwts.		Article.			Weight. Tons Cwts.	
Apples ...	...	...	29,314	10	Lemons ...	...	...	2,211	19
Apricots ...	...	...	249	7	Liquorice ...	...	...	16	15
Almonds ...	...	...	428	16	Meal (various) ...	...	...	18,051	7
Bananas ...	...	...	5	11	Meats (canned) ...	...	...	5,798	2
Bacon ...	...	...	524	7	Melons ...	...	...	295	18
Barley ...	...	...	22,360	11	Milk (canned) ...	...	...	50	—
Butter ...	...	...	8,966	16	Milk (powder) ...	...	...	264	11
Cereals (Oats, Rye, &c.)	...	...	172,912	4	Molasses ...	...	...	198	13
Cheese ...	...	...	6,575	—	Macaroni ...	...	...	395	17
Coffee ...	...	...	28	10	Nuts (various) ...	...	...	2,575	16
Cocoa ...	...	...	55	15	Oils (various) ...	...	...	8,230	8
Condiments ...	...	...	2,433	1	Onions ...	...	...	7,794	4
Confectionery ...	...	...	269	17	Oranges ...	...	...	51,139	7
Cream of Tartar ...	...	...	121	8	Orange and Lemon Peel	...	...	203	18
Eggs ...	...	...	69,534	18	Peaches ...	...	...	1,752	16
Eggs (liquid) ...	...	...	172	14	Pears ...	...	...	4,065	18
Eggs (albumen) ...	...	...	141	7	Pears (canned and dried)	...	...	3,516	6
Fish (canned, &c.) ...	...	...	1,150	1	Pineapples ...	...	...	3,154	6
Fruits (canned) ...	...	...	5,742	15	Plums (canned and dried)	...	...	633	3
Fruits (dried) ...	...	...	8,772	11	Potatoes ...	...	...	2,510	15
Fruits (juices) ...	...	...	578	8	Pomegranates ...	...	...	48	—
Fruits (pulp) ...	...	...	218	16	Peas ...	...	...	10,939	2
Farinaceous Foods ...	...	...	8,035	15	Rice ...	...	...	3,564	19
Flour (various) ...	...	...	103,293	5	Sugar ...	...	...	6,706	15
Glucose ...	...	...	1,754	16	Sundries ...	...	...	3,089	15
Grapes ...	...	...	2,897	11	Syrup ...	...	...	49	16
Grape Fruit ...	...	...	2,707	17	Tomatoes ...	...	...	18	18
Hams ...	...	...	2,662	9	Tomatoes (canned) ...	...	...	1,268	19
Honey ...	...	...	123	5	Vegetables (canned) ...	...	...	781	12
Lard ...	...	...	727	2	Wheat ...	...	...	196,624	5
<i>Total weight</i> ...			...	...	788,711 tons 3 cwts.				

The following foodstuffs were found unfit and disposed of to the satisfaction of the Medical Officer of Health:—

Article.	Weight.		Article.	Weight.	
	Cwts.	Qrs.		Tons.	Cwts.
Apricot Pulp	25	1	Grapes	10	2
Biscuits	6	—	Lemons	55	—
Butter	1	2	Macaroni	3	1
Cream of Tartar	100	—	Melons	29	—
Corn Flakes	1	3	Oranges	39,249	—
Egg-liquid (whole)	9	—	Orange Juice	8	2
Egg Yolk	300	—	Pears	92	—
Flour	562	2	Poultry	4	2
Fruits (canned)	9	3	Peas (canned)	1	—
Ginger (wet)	26	2	Tomato Puree	13	1
Grape Fruit	10	1	Wheat	200	—
<i>Total weight</i>			<i>40,718 cwts. 2 qrs.</i>		

The foregoing table shows the great variety of the foodstuffs examined and dealt with during the year. The method of procedure is the same in each case. The suspected foodstuffs are detained for further inspection, the consignee is communicated with, and a suitable time is arranged for the re-examination of the material. As a rule, the consignees on being satisfied as to the unsoundness of the food agree to the disposal of the condemned food, thereby obviating the necessity of obtaining a warrant from the Sheriff or Magistrate. Much time is often taken up in examining and supervising the reconditioning of consignments. The following are examples of this:—

Poultry.—Three crates of poultry which arrived at the Port from the Irish Free State were found on examination to be unfit and unwholesome. The consignee explained that the poultry were known to the trade as “rough” hens, and he suggested that any of the birds which were not wholly unsound might be passed, so that pieces of them might be removed for human consumption. The importer was informed that he would either have to destroy the entire consignment or re-ship it back to its port of origin. He agreed to the latter course, and the birds were subsequently re-shipped to Cork. From the appearance of this consignment, it was obvious that the birds had been killed because of disease, and had been dressed and packed for export with a complete disregard for any decent standard of what constituted meat fit for human consumption.

Canned Apricot Pulp.—A consignment of 149 cases of canned apricot pulp in 10-lb. containers was found to contain a number of blown and burst tins in several of the cases. The parcel was detained for further examination in conjunction with the consignee. Examination showed that $17\frac{1}{2}$ cases of ten 10-lb. tins were burst, blown, pierced, or so badly rusted as to be considered unfit for consumption.

Tainted Flour.—This parcel, which formed part of a general cargo from Australia, had apparently been damaged by oil fuel, a suspicion corroborated by the City Analyst. All bags stowed in the vicinity of the supposed area of contamination were carefully gone over. After exhaustive tests the taint was found to be confined to one particular brand. This lot was then set out in three groups—bad, suspicious, and presumed good. A final examination showed 45 bags of this flour to be so badly tainted as to be unfit for human consumption. It was agreed that the damaged flour be disposed of for technical purposes.

Apricot Pulp.—Five casks of apricot pulp of Hungarian origin arrived coastwise from London and consigned to a preserve manufacturer in Glasgow. An informal sample taken from one of the casks disclosed the fact that the pulp contained sulphur dioxide in excess of the amount permitted in this particular fruit by the Public Health (Preservatives, Etc., in Food) Regulations. Samples were taken from each cask and submitted to the City Analyst, who reported as follows:—

" Sample Marked.	Sulphite Preservatives		
	Sulphur Dioxide in Parts per Million.		
G.R.T. 396... ..	1,998	(498 parts in excess).	
G.R.T. 466... ..	1,948	(448	„ „)
G.R.T. 470... ..	2,192	(692	„ „)
G.R.T. 584... ..	2,150	(650	„ „)
G.R.T. 596... ..	1,854	(354	„ „)

" All the above samples contain an excess of sulphite preservatives to the extent indicated in each individual sample and are, therefore, not in conformity with the Public Health (Preservatives, &c., in Food) Regulations (Scotland)."

The consignee was notified of these results and when asked to explain his position in the transaction he produced an invoice for the consignment which contained a warranty that the pulp to which it referred complied with the Preservatives in Food Regulations. He stated that the pulp had been bought by him in good faith, but in view of the fact that the warranty was a false one he did

not intend to accept delivery of the consignment and would return the pulp by the first available steamer. No further action was thought necessary. The consignee, however, was asked to advise the Department as to the name of steamer, time and date of sailing, so that the consignment could be identified prior to shipment. These conditions were duly observed, and the five casks were identified on board a vessel en route for London. The Port Medical Officer of Health of London was advised as to the return to London of this parcel.

Cream of Tartar.—Forty-two casks of cream of tartar were landed from Eastern ports and found to contain 40 parts of arsenic per million, the standard of the British Pharmacopœia being 2 parts per million. A Detention Order was placed on the parcel.

Owing to the high percentage of arsenic in the first sample, further samples were taken for analysis. The City Analyst reported on these samples as follows:—

" Sample Marked.	contained	Arsenic (parts per Million).			
A.A.1		40	(38 parts in excess).		
A.A.2	"	35	(33	")
W.G.13	"	16	(14	")
W.G. 16	"	14	(12	")
W.G. 38	"	11	(9	")
W.G. (bulked)	"	12	(10	")

In view of these results the consignees were informed that this consignment would require to be re-exported or destroyed.

A further consignment of 38 casks from the same manufacturers—a firm in Marseilles—and to the order of the previous importer arrived in the interval. Samples were taken and submitted to the City Analyst, who reported as follows:—

" Cream of Tartar, W.G.2, ex s.s. " — " :—

Lead (parts per million)	...	...	...	...	10
Arsenic (parts per million)	...	...	...	...	12

Cream of Tartar, W.G.3, ex s.s. " — " :—

Lead (parts per million)	...	...	...	...	12
Arsenic (parts per million)	...	...	...	...	12 "

“The aforesaid samples contain arsenic in excess of the standard prescribed by the British Pharmacopœia.”

The importer was asked to forward, in terms of Article 8 of The Imported Food Regulations, a written undertaking that this cream of tartar along with the previous consignment would only be removed from the place of detention for export, and would not be sold for human consumption. The manufacturers ultimately admitted negligence and the consignment was re-exported.

PUBLIC HEALTH (PRESERVATIVES, Etc., IN FOOD) REGULATIONS (SCOTLAND), 1925.

The above Regulations apply to all imported articles of food-stuffs, except where they are intended for re-export or for use as ship's stores.

Cream.—Fairly large consignments arrive from the North of Ireland and Irish Free State ports. During the year 26 samples of cream were examined by the City Analyst for boron preservative, with negative results.

Arsenic in Apples.—Of 20 samples of various brands of apples, 13 were reported as containing no arsenic. The remaining seven samples contained arsenic within the prescribed limit. Eleven of the samples were taken from apples landed from North American ports, and nine were from Australasian and Canadian ports. Of the nine samples taken from these latter ports, the arsenic found was well within the limit. It was not considered necessary to condemn any of the fruit.

Boric Acid in Oranges.—Six samples of oranges were taken during the year and submitted to the City Analyst, who reported the presence of boron preservatives in all samples in small quantities ranging from 0.009 to 0.016 of a grain per lb. The evidence suggests attempts to preserve the fruit by dipping in a boron solution, but in view of the fact that the quantity present is found naturally in citrous fruits it is difficult to say what amount may indicate treatment.

FOODSTUFFS EXAMINED.

During the year foodstuffs were sampled and submitted to the City Analyst, who reported as follows:—

Article.	Samples Reported.		Fit for Human Consumption.	Unfit for Human Consumption or not in conformity with Regulations.	Notes on Defective Samples.
			
Almonds	2	—	
Apples	20	—	
Apricot Pulp	—	6	20 cwts. contained an excess of SO ² and were reshipped. 5¼ cwts. burst and blown were condemned.
Baking Powder	1	—	
Biscuits	3	2	Damaged by bilge and sea-water—6 cwts. condemned.
Butter	12	1	Damaged by river-water—1½ cwts condemned.
Cereals (Grapenuts, &c.)			7	2	Damaged by sea-water—1¾ cwts. condemned.
Coffee and Coffee Substitute	3	—	
Confectionery	6	—	
Cheese	4	—	
Condiments	3	—	
Cream	26	—	
Citric Acid...	1	—	
Cream of Tartar	12	9	Contained an excess of arsenic—reshipped to port of origin.
Desiccated Cocoanut	2	—	
Egg Yolk (liquid)	7	1	Contained boron compound. 300 cwts. condemned—released for technical purposes.
Egg Albumen	4	—	
Egg Whole	1	—	
Fats (various)	14	—	
Fish (canned, &c.)	28	—	
Flour (various)	7	—	
Fruits (canned)	72	4	Burst and blown—9¾ cwts. condemned.
Fruits (dried)	33	—	
Fruit Pulp	3	—	
Grapes	—	1	Affected with mould. 10½ cwts. condemned.
Grape Fruit Juice	3	5	Contained an excess of SO ² . For cordial making.
Grape Juice	—	6	Excess of SO ² . For manufacturing into British wines.
Ginger (wet)	1	2	Contaminated with dirt and debris. 26½ cwts. condemned.

Samples Reported.					
Article.	Fit for Human Consumption.		Unfit for Human Consumption or not in conformity with Regulations.		Notes on Defective Samples.
	
Ham and Bacon	2	—		
Honey	4	—		
Jams and Jellies	2	—		
Lard	9	—		
Lemon Juice	2	—		
Macaroni	—	1		Damaged by sea-water. 3¼ cwts. condemned.
Margarine	1	—		
Meats (canned)	37	—		
Milks (canned)	1	—		
Milks (dried)	1	1		Slightly deficient in milk fat and solids.
Mineral Waters	2	—		
Molasses	2	—		
Nuts	1	—		
Oils (various)	20	—		
Oranges	6	—		
Orange Juice	4	6		Excess of SO ² . For cordial making.
Peel in Brine	4	—		
Pork and Beans	4	—		
Rice	1	—		
Salt	2	—		
Sauces	8	—		
Soups	4	—		
Strawberries (preserved)		6	—		
Sugar	7	—		
Syrup	4	—		
Tartaric Acid	4	—		
Tea	14	—		
Tomatoes (canned)	20	3		Burst and blown. 13¼ cwts. condemned.
Vegetables (canned)	13	—		
Wheat	—	4		Damaged by river water. 200 cwts. condemned—released for cattle-feeding.
Wines	1	—		
Water	10	—		

S. HENDRY,

Senior Port Inspector.

FOREIGN MEAT REGULATIONS.

The following statement, compiled from information supplied by the Corporation Veterinary Surgeon, indicates the work done under the Foreign Meat Regulations:—

EXAMINED.

BEEF (<i>Fresh Meat</i>)—				FISH—			
Quarters	...	...	18,361	Salmon (boxes)	...	...	368
Boxes	...	...	22,929	POULTRY—			
Bags	...	...	356,292	Ducks (barrels)	...	...	100
Cuts...	...	...	21,690	Turkeys (boxes)	...	...	200
				Chickens (boxes)	...	...	7
VEAL—				OFFAL—			
Bags	...	...	9,090	Ox-Tongue (bags)	...	...	806
				Ox-Tails (bags)	...	...	96
MUTTON AND LAMB—				Ox-Cheeks (bags)	...	...	1,362
Carcases	...	...	127,690	Ox-Livers (boxes)	...	...	1,441
				Ox-Livers (bags)	...	...	669
PORK—				Ox-Hearts (bags)	...	...	1
Carcases	...	...	182,244	Ox-Tripe (boxes)	...	...	1,830
Sides	...	...	115,161	Ox-Tripe (bags)	...	...	599
Boxes	...	...	1,630	Ox-Kidneys (bags)	...	...	49
Bags	...	...	13,786	Ox-Kidneys (boxes)	...	...	192
				Ox-Skirts (bags)	...	...	6
BACON AND HAMS—				Lamb Livers (crates)	...	...	455
Bales	...	...	3,315	Lamb Livers (cartons)	...	...	212
Boxes	...	...	542	Sheep Kidneys (boxes)	...	...	34
				Sheep Casings (tierces)	...	...	107
				Beef Casings (tierces)	...	...	281
				Pig Casings (tierces)	...	...	5
				Pig Livers (tierces)	...	...	5

CONDEMNED.

Beef (bags)	...	...	1,348½	Pork (bags)	...	...	28
Beef (cuts)	...	...	6	Pork (sides)	...	...	13
Lamb (carcases)	...	...	1	Pork (cuts)	...	...	59
Mutton and Lamb (cuts)	...	...	3	Ox-Kidneys (bags)	...	...	10
Pigs (carcases)	...	...	22	Ox-Livers (bags)	...	...	1

SECTION VIII.

HOUSING.

By Dr. H. E. SEILER.

There was at Whitsunday, 1937, a total of 279,074 dwelling-houses in the city, of which 277,726 were occupied and 1,348 unoccupied. The comparative figures for the previous year were 275,438 occupied houses and 1,979 unoccupied. Linings have been granted by the Dean of Guild Court for the erection of 63,686 houses since the year 1919, and it is estimated that of these linings fully two-thirds were in respect of local authority houses. The actual number of houses erected by the Corporation since the passing of the Housing (Scotland) Act, 1919, and completed at 31st December, 1937, was as follows:—

Ordinary Houses	...	...	...	...	21,994
Intermediate or Houses to abate Overcrowding	...				9,212
Rehousing Schemes	...	...	...	...	13,920
Total	...	...	...	...	<u>45,126</u>

There was a further decrease in the output of new houses during the year, only 1,841 being completed, as compared with 1,985 in 1936, 3,926 in 1935, and 4,439 in the previous year. The reduction during the past two years has been caused by a number of different circumstances, the most important of which, however, has been the shortage of skilled labour, particularly brick-layers. The Corporation is considering at the present time the practicability of increasing the output by erecting houses of timber or poured concrete, methods of construction which are not dependent to the same extent on the number of bricklayers available.

Housing Operations. — Every endeavour is made to co-ordinate the representation of uninhabitable properties with the provision of alternative rehousing accommodation. Comparatively few houses of this type have come forward within the past two years and as a result it has not been possible to take action regarding many

undesirable properties in the city. A total of 1,228 houses were represented under Section 16 of the Housing (Scotland) Act, 1930, during the year. This is an increase on last year's total of 402 houses, but shows a reduction compared with 2,011 in 1935 and 2,126 in the previous year. Details of the houses are shown in the table on page 170. Demolition Orders were passed in 739 houses, while in 483 Closing Orders were made. The comparative figures for 1936 were 100 Demolition Orders and 236 Closing Orders.

An appeal against a Closing Order made by the Corporation under Section 16 of the Housing (Scotland) Act, 1930, in respect of two tenement properties at 57-63 Garngad Road was heard in the Sheriff Court towards the end of the year. The houses, thirty in number, were regarded by the Local Authority as unfit for human habitation principally on the grounds of lack of light and ventilation and inadequate sanitary conveniences, while in many instances serious bug infestation was present. Evidence was led at considerable length on both sides and although the owners offered to carry out certain improvements in the property it was held by the Sheriff that "the houses are not fit for human habitation and that the offer made by the pursuer would not make them so." The appeal was therefore refused and the Closing Order affirmed. In view of the importance of the decision the interlocutor of the Sheriff Substitute is given in full.

GLASGOW, 11th December, 1937. The Sheriff-Substitute, having heard counsel for the pursuer and the procurator for the defenders and considered the cause, Finds in fact for the reasons stated in the Note hereto (1) that the dwelling-houses on the three upper storeys at 57 and 63 Garngad Road, Glasgow, are unfit for human habitation: (2) that were the work which the pursuer undertakes to do on them done it would not render them so fit. Therefore Refuses the Appeal and Affirms the Closing Order of 20th April, 1937, appealed against. Finds no expenses due to or by either party.

(Sgd.) D. S. MACDIARMID.

NOTE:—This is an appeal under Section 20 of the Housing (Scotland) Act, 1930, against a Closing Order made by the Defenders on 20th April, 1937, under the powers conferred on the Local Authority by Section 16 of that Act, and relating to thirty houses at 57 and 63 Garngad Road belonging to the pursuer.

The property consists of two four-storey, stone built tenements, part of the ground floors being partly occupied by business premises. On each of the other floors are four dwelling-houses—one three-roomed and one two-roomed to the front and two two-roomed to the back. There is one W.C. on each floor.

The grounds upon which the defenders proceeded to pronounce the Order are set forth in the representation required by Section 16. A copy of it forms No. 6 of process. These grounds were communicated to the pursuer, who, exercising his rights under the Section, made an offer to do certain work on the premises.

A copy of the offer forms No. 4/1 of process. This offer was rejected by the defenders. These grounds upon which the defenders decided that these houses were unfit for human habitation may be thus summarised :—

- (1) Lack of ventilation ;
- (2) Lack of light ;
- (3) Water-closet accommodation inadequate ;
- (4) Bug infestation ; and
- (5) Certain repairs to fabric necessary, including the opening-up of closed-in beds.

The offer of the pursuer (leaving on one side that relating to the ground floor) was :—

- (1) To close on each of the upper floors a single room and to use the space so provided for the construction of a water-closet and for additional light and ventilation ;
- (2) To open up the closed-in beds " so far as possible " ;
- (3) To eradicate vermin ; and
- (4) To repair generally the houses so far as necessary.

The Court is not concerned with the ground floor. The offer there was to convert the houses into shops as opportunity arose—that is to say no longer to let them as dwelling-houses. As I understand the matter the defenders take no objection to this, provided it be found that the upper floors are fit for human habitation.

Whether a house is fit for human habitation or not is not a mere matter of opinion. The Acts afford certain criteria. It would, I think, be difficult to affirm that they set up a rigid standard, and, indeed, it was contended on both sides of the Bar that Section 49 of the 1930 Act, the Section with which the Court is in the main concerned, was not absolute but merely indicative. I accept that proposition. The Court, in my opinion, has, in the first place, to have in mind the purpose of the Act of 1930 as it is set forth in the preamble. The Act purports to be an Act " to make further and better provision with respect to the clearance or improvement of unhealthy areas, the repair, demolition, or closing of insanitary houses, and the housing of persons of the working classes in Scotland."

Then, turning to Section 49, the Court is to be guided in arriving at its conclusion—It was not, as I have said, put higher on either side—by reference to " any building regulations in operation in the district," or to " the general standard of housing accommodation for the working classes in the district."

It is, I think, sufficiently clear, as was argued for the pursuer, that the Glasgow Streets, Sewers, and Buildings Consolidation Order Confirmation Act, 1937, *e.g.*, Section 142, could not be rigidly applied to old tenements of this type. Nor was it so intended, for Section 145 provides that in the case of reconstructed houses—as these houses would be were the offer of the pursuer accepted—the provisions of the Act and the Bye-laws made thereunder are to apply " only so far as reasonably practicable."

No difficulty arises in interpreting the word " district." The " district " in question is not the particular part of the City in which these houses are situated but the whole City (Housing (Scotland) Act, 1925, Section 118).

So far as I have been able to discover, not one of the Acts dealing with housing has attempted a precise definition of the phrase " the working classes." The nearest would seem to be in paragraph 12 (c) of the Fifth Schedule of the Act of 1925—but then the attempt is truly not made. The word used is " includes," and, in any event, this sub-paragraph would seem to be applicable only in the context

of the Schedule. The phrase is, however, to be found here and there in the Acts and it occurs in Section 49. It must be presumed to be intended to indicate, however loosely, a section of the population. In popular language it is probably used to indicate those who work with their hands—and their families—in contra-distinction to those who do not, between, it may be the manual and “the black-coated worker,” although many of the latter no doubt earn smaller incomes than some of the former.

As it seems to me, the main guidance is to be had from rentals. It may be assumed that the £21 rental of the House Letting and Rating (Scotland) Act, 1911, indicated houses occupied by “the working classes.” The Housing Acts specifically deal with houses intended for them, so that houses of the £26 rental of Section 1 of the Housing (Scotland) Act, 1925, are “working class” houses. A further upward tendency is observable in the £26 5s. rental of the Rent and Mortgage Restrictions (Amendment) Act, 1933, especially when, as I think, houses in the lower part of the £26 5s. to £45 division fall to be added. To-day, with the provision of houses under the Housing Acts by the local authority, houses up to at least £30 *per annum* may reasonably be considered to be occupied by “the working classes.” It was given in evidence in this enquiry that of the 45,000 houses built by the local authority 24,136 had rentals of over £26 5s. It, accordingly, seems to me that when dealing with “the general standard of housing accommodation for the working classes in the district” regard must be had not only in the phrase of the factor of these tenements, to “the poor cheap houses” in which category he placed them, but also to all the working class houses, including houses provided under the Housing Acts by the local authority. The comparison, in short, is not with houses more or less identical with the houses in question, but with the whole working class houses in the district of the local authority.

If, then, the houses at 57 and 63 Garngad Road “by reason of disrepair or sanitary defects” fall short of the general standard of the whole working class houses in the district, the conclusion may be reached that they are not fit for human habitation. I have dealt with this point at some length because, in the absence of definition, it has caused me considerable difficulty.

I come now to the points raised under the headings tabulated above; and in the first place I note that it is not disputed by the defenders that the repairs to fabric under Head (5) (with the possible exception of the closed-in beds) can be done at a reasonable cost. It seems doubtful whether these beds could, in every case, be opened up without interfering with the press accommodation but, in the view I take, this question is not of importance. For the rest, it is maintained by the defenders that even were the alterations proposed made, the houses would still be unfit for human habitation.

(1) **Lack of Ventilation.**—The admission was made by counsel for the pursuer in the course of the debate on the evidence, that the houses at 57 and 63 Garngad Road were back-to-back houses. This is, indeed, plain on the evidence and on reference to the plan, No. 8 of process. That they are back-to-back houses does not, however, end the matter. The question is not whether they are back-to-back houses but whether their ventilation is more or less as good as the ventilation of working class houses in the district. Now, it is, I gather, not in dispute between parties, that in back-to-back houses it is not possible to have through ventilation. It was conceded by Mr. Bishop, for the pursuer, in the course of his evidence (p. 164 E) that the reason for the condemnation of such houses (in, for example, Section 13 of the Housing (Scotland) Act, 1925), was precisely this impossibility. I think, therefore, that it may be said that there is a presumption that the houses in question are not properly ventilated. At any rate, presumption or not, on the balance of the evidence, it seems to me to be established that the ventilation of these houses is bad. It is true that there is a number of back-to-back houses in the district of the defenders; but not such a number as to lead to the conclusion that, being back-to-back houses, they do not fall below the general standard. On the contrary, the statistical evidence clearly shows that they do. But, further, I am of

opinion that the statutory prohibition of back-to-back houses must also be taken into account. It falls to be read in conjunction with the avowed purpose of the Housing Acts as exhibited, for example, in the preamble I have quoted above. For, as I have said, and, indeed, as is not, so far as the argument in this case is concerned, in dispute, the criteria furnished by Section 49 are not the only guides upon which the Court may rely.

The question then arises; would the proposed alteration cure the defect? My view is that it would not. It might, no doubt, ensure a greater current of air in the passage, as would a breeze blowing in the streets upon which the typical English back-to-back houses—or houses in miners' rows in both countries—respectively front. But I am at a loss to understand how this would affect the ventilation of the houses themselves. The suction theory put forward by one witness for the pursuer (but failing to secure the concurrence of another) cannot, in my opinion on the whole evidence, be accepted.

(2) **Lack of Light.**—This point raises a question of some difficulty and, as it seems to me, importance. The expression "sanitary defects" in Section 49 includes "darkness" but "darkness" is not defined, that is to say an absolute standard of lightness by which darkness may be tested is not laid down. It is merely enacted that regard shall be had to the extent to which, by reason of darkness, the house falls short of the building regulations in force or of the general standard of working class accommodation in the district. Now, in certain respects, these houses conform to the Glasgow Order Confirmation Act, 1937, above cited. The windows, that is to say, bear the requisite ratio to the floor-areas (Section 143); and the distance of the back wall of the tenement from the bonded store conforms to the provisions of Section 163. Yet, on the evidence of Dr. Horne, the houses are not only dark but very dark, and this result is arrived at by the application of a standard of light. Dr. Horne's very interesting evidence reveals that much research work has, in recent years, been done on the problem of light in buildings, whether used for educational or industrial purposes or as dwelling-houses; and that a "daylight factor" has come to be recognised both by the Illumination Research Committee of the Department of Scientific and Industrial Research of the Home Office and by an International Commission on which some fifteen countries were represented. This daylight factor, Dr. Horne explains, is "the ratio usually regarded as a percentage, taken as a percentage, of the amount of light falling on an area in a room compared to the amount of light that would fall on a similar area exposed to the hemisphere." It remains to add that .2 *per cent.* of daylight factor has been agreed as the lowest tolerable amount in a dwelling-house. The instrument for testing for this daylight factor is a meter, and that used by Dr. Horne, in making his tests, was invented only last year. But although this is so, the method of testing by meter has been in use for a number of years, and, indeed, would seem to have been approved in an English case in which the question of light in a building arose (*Semon & Co. v. Bradford Corporation* 1922 2 Ch. 737 per Eve J. at p. 746).

I do not think that the accuracy of the tests made by Dr. Horne is in dispute; and what he found, as shown on the plan, No. 9 of process, was that in large sections of each room the lowest tolerable amount daylight factor was not found. It does not, therefore, admit of doubt that if it be competent to rely on this test, then darkness, by this standard of lightness, is proven.

It was argued for the pursuer that this standard ought not to be applied; and further, that as these houses conformed to the building regulations, as cited above, that was an end of the matter. I am not prepared to sustain the second branch of the argument. It does not seem to me that conformity with those regulations in the respect above-mentioned is final. The Court is to have regard to them as a factor influencing the decision in the case. And in this case the space between the tenement and the bonded store is only relevant to the rooms to the back of the tenements, while it is clear, even on the evidence for the pursuer, that the lateral windows in the kitchens throughout render these rooms dark at any rate in parts. Nor, indeed, am I disposed to concur in the first part of the argument. It is here

that the point of general importance which I mentioned above seems to me to arise. Is the Court entitled to have regard to a standard of light of which not a hint is to be found in the Housing Acts? What the Court has, in the first place, to determine under Section 49 is whether or not the house in question is dark; and it seems humbly to me that when no absolute standard is enacted where the word "darkness" would seem to be used in a popular sense, the Court must be entitled to avail itself of any reliable evidence. Now, as I have said, the reliability of Dr. Horne's tests is not challenged. I am, therefore, of opinion that the Court is entitled to have regard to the results at which he arrived. If I be right, it seems to me that when Dr. Horne's evidence is considered with the admissions made by witnesses for the pursuer (*e.g.*, Mr. M'Gill at p. 113 C: Dr. Turner at p. 135 C), the conclusion must be reached that these houses are dark in the sense of Section 49. But then, despite this fact, they may be fit for human habitation. As I have said—although I doubt whether it has much to do with the measure of light—they comply with the building regulations of 1937 in the respects mentioned above. So far, then, it may be said that they are up to the general standard. When, however, a comparison is made with the working class accommodation in the district a different story is revealed. The evidence for the pursuer on this point is, as might no doubt be expected, general and vague. It comes to this that in the opinion of the witnesses, founded on no exact knowledge, these houses are no darker than other working class houses. But Dr. Horne, having tested with his meter, says that they are. Statistically, no doubt, his evidence does not profess to be more than approximate. Of the 194,000 houses with rentals below £26 5s. *per annum* it is calculated that 20,000 fall below the .2 *per cent.* light factor. The others are above it—and if and when the houses built by the local authority are taken into the count, the conclusion must be reached that these houses in Garngad Road, by reason of darkness, fall below the general standard. This is the conclusion at which I accordingly arrive—with, I must admit, some hesitation. For while it seems to me to be logically sound, I may perhaps be excused if, with counsel for the pursuer, I wonder if houses other than those of the working class would all pass the test were Dr. Horne's meter introduced into them!

There is no proposal to remedy this defect, the window proposed to be introduced in connection with the water-closet accommodation having obviously nothing to do with the lighting of the several houses.

(3) **Water-Closet Accommodation.**—Under this heading it was contended for the pursuer, not, I think, very seriously, that any accommodation at all satisfied the provision of Section 49. "Sanitary arrangements" not being qualified by "adequate." It is true that the word "or" is used in Sub-Section (1) but it seems to me that the whole sense of the sub-section demands this qualification. The sub-section specifically dealing with "lack" and "inadequacy." At the same time I do not think that the point is of much importance, for if under Sub-Section (2) the comparison be with the general standard and that standard should be found to be, for example, a water-closet for each house, then, when there are four houses and one water-closet, three of the houses would seem to be without sanitary arrangements.

On the merits, I think it is barely disputed that one water-closet to four houses is inadequate, and that such accommodation falls below the general standard. In any event, the statistics set forth in the evidence for the defenders make both these propositions abundantly clear.

The question, accordingly, comes to be whether the proposal of the pursuer would remedy the defect. With two water-closets to four houses, would these houses still fall below the general standard? The statistics will be found in Dr. Horne's evidence. I think it is only necessary to note that while out of 194,000 houses with an annual rental of £26 5s. and under, 99,000 have water-closets in common, 95,000 have a water-closet to each house. The relative percentages are roughly 51 per cent. to 49 per cent. But then when houses up to a rental of £30 *per annum* are taken into the computation, the number of houses having each a water-closet exceeds the number with water-closets in common. The percentage of the latter then drops to 45 per cent.

There is a further point which appears in the Notes of Evidence and was argued somewhat strenuously at the debate. In the Housing Acts will be found prohibition of houses with less than three apartments, as, for example, in the Housing (Scotland) Act, 1925, Section III, which really re-enacted Section 44 of the Housing and Town Planning (Scotland) Act, 1919. This provision was adopted in the Glasgow Act of 1937 (above cited) and is to be found in Sections 142 and 145. Now, the proposal made here involves taking the third room of the three-roomed houses away. In the light of the legislation above cited, this is obviously a retrograde step.

But this does not end the difficulty. The defenders in this case are by Section 142 (5) of the 1937 Act made, as it were, masters of the situation. They may, it is true, consent to a new, or, (Section 145) a re-constructed house having less than three apartments—but they may not, and the evidence I have before me is that, so far as these tenements are concerned, they would not consent. It is, no doubt, not necessary to my decision that I should forecast what might happen in the future were I to accept the offer of the pursuer, but it seems to me well to note the attitude which the defenders might take up. On the whole matter under this head, my view is that the proposed new accommodation would leave these houses below the general standard.

(4) **Bug Infestation.**—Under this head it was strongly urged for the pursuer that the Acts did not deal with this matter at all; that there was nothing in Section 49 to suggest that this was a "sanitary defect." But the definition of "sanitary defects" in Section 49 is not exclusive. It includes certain things, but there may be others which render houses unfit for human habitation. It is not pretended that bug infestation is in itself enough to render a house so unfit, but it was argued for the defenders that it ought to be taken into consideration. Now, the ordinary, common-sense view on this point does not seem to me to be doubtful; nor does it seem to me to be doubtful that while, on the evidence before me, it has not been proved that bugs are carriers of disease, they are far from salutary co-occupiers of a dwelling-house. If, indeed, they were harmless non-irritants why the war that is urged against them by no less a department than the Department of Public Health? They are the offspring of dirt, symptoms, as it were, of an insanitary condition. It seems to me that their presence in a dwelling-house is a relevant consideration. If I be right, then on the evidence for the defenders there is no room for doubt that these houses are infested with bugs and that the infestation is serious. What is meant by "serious infestation" is that the bugs have got beyond the first two stages of "Trace" and "Medium infestation" and have reached the third stage, that in which they have got into the fabric of the house. Nor on the evidence on either side does it seem to me to admit of dispute that to eradicate bugs when this stage has been reached is a task of very grave difficulty if not one impossible of performance. It would, at any rate, involve the removal of the tenants and, even at that, the success of the necessary operations is problematical. The answer made is that the bugs have not penetrated into the fabric, that they are there because the present tenants of the houses are dirty, and that they have got no further than, at the worst, the second stage. The dirt of the tenants figures largely in this picture. "The worst feature," says one witness, was the type of tenant; but another admits that where the bugs were, the tenants were not dirty. They were very decent people making efforts to get rid of the bugs, but in the wrong way. And this witness (Dr. Turner) further says in examination-in-chief that in some of the houses the bugs had reached the third stage. But then while Dr. Turner must have made some kind of an examination, it is matter of admission that the others did not. Their evidence is for the most part hearsay of the tenants and none of the latter appeared to deny or corroborate. On the whole matter under this head, I entertain no doubt that the evidence for the defenders gives the true account of the state of matters.

On the question of the general standard, the evidence seems to me to establish that, in the words of Mr. Paterson, the Sanitary Inspector of the Northern Division, "the great majority of the working class houses in Glasgow are not bug-infested,"

There is an offer to cure this defect. It seems to me to be based on the case made for the pursuer. That is to say it does not contemplate the expense which is involved in adopting the measures necessary to make a problematical clearance of the bugs. That would come to some £10 to £12 a house.

I have thought it right to deal with each of the points raised in some detail but in the end the words of Dr. Horne seem to me to apply. "You cannot," he said, "condemn a house on one point alone." It is when one comes to consider the whole indictment, in some parts, as it seems to me, strong, in others not so strong, as for example, under the head "lack of light," that, in my opinion, the conclusions must be reached (1) that as they stand these houses are not fit for human habitation; and (2) that the offer made by the pursuer would not make them so.

This being the view I take, the question of reasonable expense does not arise.

The defenders do not ask for expenses against the pursuer.

(Intd.) D.S.M.

Representation was made to the Corporation under Part I. of the 1930 Act with respect to an area in the South-Western Division of the city. The area, situated at Paisley Road West, includes 44 houses, 42 of which are regarded as unfit and two as fit for human habitation. A Compulsory Purchase Order was made by the Corporation and it is intended to utilise the cleared site for the erection of new houses.

The Burnside Street Clearance Area Compulsory Purchase Order, 1936, was confirmed on 21st May, 1937, with only a very slight modification, after a public enquiry by the Department of Health.

Clearance of the large area at Orkney Street and Neptune Street which was commenced last year has been continued. The area includes 721 houses, the great majority of which are regarded as unfit for human habitation. The procedure which is being adopted by the Corporation is to deal with individual properties as rehousing accommodation becomes available. At the same time negotiations are proceeding with the owners with a view to the acquisition of the various subjects in the area. It is hoped in this way to clear the whole area and thereafter utilise the site for rehousing purposes. So far five tenements including 127 houses have been demolished and the sites cleared, while other two tenements comprising 40 houses have been condemned and will be demolished whenever the tenants have been provided with alternative accommodation.

The tables on page 180 show the present position of the various schemes at the end of the year.

Decrowding Operations.—A total of 3,053 overcrowded families, 437 from Local Authority houses and 2,616 from privately owned properties, have been rehoused by the Corporation since the passing of the Housing (Scotland) Act, 1935. The vacated houses have been inspected in accordance with statutory requirements to discover the effect of the decrowding operations, and the position at the end of the year is shown in the following table:—

Size of Houses.				No. of Houses inspected.	Over- crowding removed.	Over- crowding reduced.	Over- crowding unchanged.	Over- crowding increased.
1 Apartment	...	...		720	506	194	12	8
2 Apartments	...	...		1,901	1,493	267	60	81
3 Do.	...	...		412	354	29	10	19
4 Do.	...	...		20	15	4	—	1
Total	...	...		3,053	2,368	494	82	109
					77.5%	16.2%	2.7%	3.6%

Until the Appointed Day as defined in Section 86 of the Act has been fixed by the Department of Health, local authorities have no effective means of controlling the occupancy of decrowded houses. It is satisfactory, therefore, to observe that only 585 houses, or less than one-quarter of the total, were again occupied in excess of the "permitted number." Overcrowding was remedied in 77 per cent., while in a further 16 per cent. the conditions were improved. Opportunity was taken during the inspection to measure the floor area of the rooms of the decrowded houses, in accordance with the Housing (Computation of Floor Area) Regulations (Scotland), 1935, while, in addition, measurement was carried out in respect of other houses in the same tenement. So far, it has been found that in only some 2 per cent. of the total houses is the permitted number of occupants affected by measurement, and where this is so the reduction in most cases is by only half-a-unit.

Sub-Letting.—Attention has been directed in previous Annual Reports to the increasing practice in the city of the sub-letting of individual rooms in large houses to separate families. The houses used in this way are situated in many instances in residential districts and are of such a size and type that difficulty has been experienced by the owners in letting them to single families. While accurate statistics are not available, it is estimated that fully 2,000

families, many with young children, are living in sub-let apartments in the city. The conditions found in a considerable number of the houses are definitely undesirable. The water supply and sanitary conveniences are inadequate. There is lack of suitable facilities for washing, cooking, and the storage of food, while the rooms in many cases are grossly overcrowded. While regular visitation is carried out to ensure adequate cleanliness, consideration has been directed for some time past to the question of dealing in a more effective manner with the undesirable type of sub-letting. Houses in this category are indistinguishable from "farmed-out" houses and could be properly registered as such. Registration, however, while empowering the Local Authority to insist on certain improvements, would not rectify the conditions. Indeed, it is considered that registration by perpetuating the single apartment house in the city would be a retrograde step. Moreover, experience has shown that if this action were contemplated by the Corporation, the owners in many instances would terminate the lets. The sub-let families would in this way require to seek other accommodation, which at the present time would be difficult to obtain. The whole problem is in fact a result of the shortage of houses in the city and can only be properly overcome when sufficient and suitable accommodation has been provided.

New powers with regard to the sub-letting and sub-division of houses have now been obtained by the passing of the Glasgow Streets Sewers and Buildings Consolidation Order Confirmation Act, 1937, which received the Royal Assent in July of this year. Section 86 of the Act provides that "no person shall erect any building or reconstruct or alter the structure of any building or alter the mode of occupancy of any building so as to affect or be likely to affect the structural stability of the building or sub-divide any building so as to increase or vary the number of dwelling-houses in such building (whether or not any alteration of the structure is proposed in connection with any such alteration of the mode of occupancy or such sub-division) without having made application to the Dean of Guild for and obtained a decree of lining therefor." It is intended in future, to report to the Master of Works cases of sub-letting which come within the scope of this Section.

SUMMARY STATEMENT SHOWING POSITION WITH REGARD TO REPRESENTATIONS
MADE UNDER SECTION 16 DURING 1937.

Division.	NUMBER OF HOUSES.					NUMBER OF HOUSES.					FAMILIES REHOUSED.				
	Number of Houses Represented.	Closing Orders.	Demolition Orders.	Not to be used for Human Habitation.	To be Rendered Fit and Occupied.	Closed.	Demolished.	Rendered Fit and Occupied.	Converted into Business Premises.	Still Occupied.	Rehousing Scheme.	"Intermediate" Scheme.	Private Property.	Unknown.	Unoccupied.
Central ...	285	181	104	—	—	143	—	—	—	142	117+	—	1	9	18
Northern ...	431*	154	271	—	—	197	43	—	—	185	232	1	5	2	—
Eastern ...	198	55	143	—	—	75	43	—	—	80	104	3	6	5	—
South-Eastern ...	163	44	119	—	—	66	19	—	—	78	73	—	3	1	8
South-Western ...	151	49	102	—	—	40	77	—	—	34	104+	—	14	—	—
	1,228	483	739	—	—	521	182	—	—	519	630	4	29	17	26

* Including 6 houses demolished by proprietor before decision made.

† Includes two cases of double occupancy.

‡ Includes one case of double occupancy.

DETAILED STATEMENT SHOWING POSITION WITH REGARD TO REPRESENTATIONS
MADE UNDER SECTION 16, HOUSING (SCOTLAND) ACT, 1930, DURING 1937.—*Continued.*

PROPERTY.	NUMBER OF HOUSES.			NUMBER OF HOUSES.			FAMILIES REHOUSED.						REMARKS.				
	Number of Houses Represented.	Closing Orders.	Demolition Orders.	Not to be used for Human Habitation.	To be rendered Fit for Human Habitation.	Closed.	Demolished	Rendered Fit and Occupied.	Converted into Business Premises.	Still Occupied.	Rehousing Scheme.	Substituted for Families Transferred.		" Intermediate" Scheme.	Private Property.	Unknown.	Unoccupied at date of Representation.
97-105 Maitland Street (F.L.) ...	6	6	—	—	—	1	—	—	—	5	1	—	—	—	—	—	* Houses closed and property demolished before decision made.
* 7 Rodney Street (F.L.) ...	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
15 Oakbank Street (F.L.) ...	24	—	24	—	—	8	—	—	—	16	8	—	—	—	—	—	Ground Flat House.
102, 102½ Maitland Street (F.L.) ...	13	13	—	—	—	7	—	—	—	6	7	—	—	—	—	—	
11 Oakbank Street (F.L.) ...	20	—	20	—	—	5	—	—	—	15	5	—	—	—	—	—	
58 Hopehill Road (F.L.) ...	26	—	26	—	—	10	—	—	—	16	10	—	—	—	—	—	
42 Cameron Street (F.L.) ...	1	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	
4 Lewis Street (F.L.) ...	8	—	8	—	—	5	—	—	—	3	5	—	—	—	—	—	
6 Lewis Street (F.L.) ...	8	—	8	—	—	2	—	—	—	6	2	—	—	—	—	—	
8 Lewis Street (F.L.) ...	8	—	8	—	—	6	—	—	—	2	6	—	—	—	—	—	
10 Lewis Street (F.L.) ...	8	—	8	—	—	5	—	—	—	3	5	—	—	—	—	—	
12 Lewis Street (F.L.) ...	8	—	8	—	—	8	—	—	—	2	8	—	—	—	—	—	
14 Lewis Street (F.L.) ...	8	—	8	—	—	6	—	—	—	4	6	—	—	—	—	—	
5 River Street (F.L.) ...	8	—	8	—	—	4	—	—	—	4	4	—	—	—	—	—	
7 River Street (F.L.) ...	7	7	—	—	—	7	—	—	—	—	7	—	—	—	—	—	
9 River Street (F.L.) ...	8	—	8	—	—	6	—	—	—	2	6	—	—	—	—	—	
124-128 High Craighall Road (F.L.) ...	14	—	14	—	—	—	—	—	—	14	—	—	—	—	—	—	
5 Tyndrum Street (F.L.) ...	2	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	
18 Colinton Street (F.L.) ...	2	2	—	—	—	—	—	—	—	2	—	—	—	—	—	—	
1 Hopehill Place (F.L.) ...	4	4	—	—	—	—	—	—	—	4	—	—	—	—	—	—	
3, 5 Hopehill Place (F.L.) ...	8	8	—	—	—	—	—	—	—	8	—	—	—	—	—	—	
12 Hopehill Road (F.L.) ...	1	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	
308 Garngad Road (F.L.) ...	26	—	26	—	—	13	—	—	—	13	13	—	—	—	—	—	

DETAILED STATEMENT SHOWING POSITION WITH REGARD TO REPRESENTATIONS
MADE UNDER SECTION 16, HOUSING (SCOTLAND) ACT, 1930, DURING 1937.—Continued.

PROPERTY.	NUMBER OF HOUSES.				NUMBER OF HOUSES.				FAMILIES REHOUSED.					REMARKS.			
	Number of Houses Represented.	Closing Orders.	Demolition Orders.	Not to be used for Human Habitation.	To be rendered Fit for Human Habitation.	Closed.	Demolished.	Rendered Fit and Occupied.	Converted into Business Premises.	Still Occupied.	Rehousing Scheme.	Substituted for Families Transferred.	"Intermediate" Scheme.		Private Property.	Unknown.	Unoccupied at date of Representation.
558 Duke Street (B.L.)	...	2	2	—	—	—	—	—	—	2	—	—	—	—	—	—	—
19 Main Street (B.L.)	...	7	7	—	—	—	—	—	—	7	—	—	—	—	—	—	—
4 Tylefield Street (F.L.)	...	6	6	—	—	—	—	—	—	6	—	—	—	—	—	—	—
32, 34 Lawmoor Street (F.L.)	...	16	16	—	—	—	16	—	—	—	16	—	—	—	—	—	—
4 Camden Street (F.L.)	...	19	19	—	—	19	—	—	—	—	—	—	—	3	—	—	—
311 Cumberland Street (B.L.)	...	2	2	—	—	—	2	—	—	—	1	—	—	—	1	—	—
28 Errol Street (B.L.)	...	1	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—
11 Kilbarchan Street (F.L.)	...	23	23	—	—	21	1	—	—	2	21	—	—	—	—	—	—
1 Norfolk Court (F.L.)	...	20	20	—	—	18	—	—	—	2	18	—	—	—	—	—	—
84 Abbottsford Place (B.L.)	...	8	8	—	—	—	—	—	—	8	—	—	—	—	—	—	—
40 Cavendish Street (B.L.)	...	3	3	—	—	—	—	—	—	3	—	—	—	—	—	—	—
42 Cavendish Street (B.L.)	...	8	8	—	—	—	—	—	—	8	—	—	—	—	—	—	—
21, 23 Thistle Street (F.L.)	...	3	3	—	—	—	—	—	—	3	—	—	—	—	—	—	—
325 Eglinton St. (First B.L.)	...	3	3	—	—	—	—	—	—	3	—	—	—	—	—	—	—
325 Eglinton St. (Second B.L.)	...	13	13	—	—	1	—	—	—	12	—	—	—	—	—	1	—
49, 51, 53 Cavendish St. (F.L.)	...	11	11	—	—	—	—	—	—	11	—	—	—	—	—	—	—
55, 57 Cavendish Street (F.L.)	...	12	12	—	—	—	—	—	—	12	—	—	—	—	—	—	—
57 Cavendish Street (B.L.)	...	5	5	—	—	—	—	—	—	5	—	—	—	—	—	—	—
9 Cavendish Place (B.L.)	...	16	16	—	—	7	—	—	—	9	—	—	—	—	—	7	—
13 Orkney Street (F.L.)	...	23	23	—	—	—	23	—	—	—	21	1	—	1	—	—	—
23 Orkney Street (F.L.)	...	24	24	—	—	—	24	—	—	—	24	—	—	—	—	—	—
25 Orkney Street (F.L.)	...	30	30	—	—	—	30	—	—	—	24	1	—	5	—	—	—
27, 29 Orkney Street (F.L.)	...	26	26	—	—	25	—	—	—	1	19	2	—	4	—	—	—
35 Orkney Street (F.L.)	...	24	24	—	—	15	—	—	—	9	12	—	—	3	—	—	—
37 Orkney Street (F.L.)	...	24	24	—	—	—	—	—	—	24	—	—	—	—	—	—	—
	1228	483	739	—	—	521	182	—	—	519	622	8	4	29	17	26	—

Two families in one house.

Two families in one house.

DETAILED STATEMENT SHOWING FURTHER ACTION TAKEN WITH REGARD TO REPRESENTATIONS
MADE IN YEARS 1933 TO 1936.

PROPERTY.	NUMBER OF HOUSES.				NUMBER OF HOUSES.				FAMILIES REHOUSED.							REMARKS.	
	Number of Houses Represented.	Closing Orders.	Demo- lition Orders.	Not to be used for Human Habitation.	To be rendered Fit for Human Habitation.	Closed.	Demolished.	Rendered Fit and Occupied.	Converted into Business Premises.	Still Occupied.	Rehousing Scheme.	Substituted for Families Transferred.	"Intermediate" Scheme.	Private Property.	Unknown.		Unoccupied at date of Representation.
Properties represented in 1933																	
835, 839 Springfield Road (F.L.) ...	3	—	3	—	—	6	2	3	2	—	2	1	—	—	1	1	—
38 St. James' Road (F.L.) ...	6	—	—	—	—	—	—	—	—	—	1	2	—	—	—	—	—
Properties represented in 1934—																	
84 Harriet Street (B.L.) ...	1	—	1	—	—	—	1	—	—	—	1	—	—	—	—	—	—
84 Harriet Street (F.L.) ...	2	—	2	—	—	—	2	—	—	—	2	—	—	—	—	—	—
21, 23, 25 Oxford Lane (F.L.) ...	16	—	16	—	—	—	—	16	—	—	15	—	—	—	1	—	—
27, 29 Olympia Street (F.L.) ...	4	—	4	—	—	—	4	—	—	—	3	—	—	—	1	—	—
29 Oxford Lane (F.L.) ...	4	—	4	—	—	—	—	4	—	—	4	—	—	—	—	—	—
Properties represented in 1935—																	
26 Armour Street (F.L.) ...	12	—	12	—	—	—	—	12	—	—	11	—	—	—	1	—	—
27, 29 Armour Street (F.L.) ...	12	—	12	—	—	—	—	12	—	—	12	—	—	—	—	—	—
1A to 115 Knightswood Rows (F.L.) ...	103	1	102	—	—	82	—	—	—	21	71	1	3	1	3	—	Three families rehoused in ordinary Corporation houses.
2, 6, 8, 10 Keith Street (F.L.) ...	6	—	6	—	—	—	—	6	—	—	5	—	—	—	1	—	—
2 North Place (F.L.) ...	18	—	18	—	—	—	18	—	—	—	15	1	1	—	1	—	—
8 North Place (F.L.) ...	15	—	15	—	—	—	15	—	—	—	14	—	—	1	—	—	—
35 North Street (F.L.) ...	12	12	—	—	—	12	—	—	—	—	9	—	—	—	4	—	Two families in one house.
19 School Wynd (F.L.) ...	9	—	9	—	—	—	—	9	—	—	7	—	—	—	1	2	Two families in one house.
27 School Wynd (F.L.) ...	8	—	8	—	—	—	8	—	—	—	5	1	—	—	2	—	—
1, 7 Gullane Street (No. 1 East) (Outside Stair) (F.L.) ...	6	—	6	—	—	—	—	6	—	—	6	—	—	—	—	—	—

46 Burgher Street (F.L.) ...	4	—	4	—	—	4	—	—	—	3	—	—	—	1	—
182 Dalmarnock Road (North Property) (F.L.) ...	9	9	—	—	9	—	—	—	—	8	—	—	—	1	—
182 Dalmarnock Road (South Property) (F.L.) ...	8	8	—	—	8	—	—	—	—	7	—	—	—	1	—
190, 192 Dalmarnock Road (North Mid Property) (F.L.) ...	8	—	8	—	—	8	—	—	—	8	—	—	—	—	—
28, 29, 30 St. Andrew's Square (F.L.) (Basement, 2nd and 3rd Floors) ...	9	9	—	—	9	—	—	—	—	7	—	—	1	1	—
26 Burgher Street (F.L.) ...	1	—	1	—	—	1	—	—	—	1	—	—	—	—	—
28, 30 Burgher Street (F.L.) ...	4	—	—	4	—	4	—	—	—	4	—	—	—	—	—
1060 Gallowgate (F.L.) (West)	9	—	9	—	9	—	—	—	—	9	—	—	—	—	—
15 Holywell Street (F.L.) ...	10	—	10	—	—	10	—	—	—	9	—	—	—	1	—
261 Tobago Street (F.L.) ...	12	—	12	—	—	12	—	—	—	11	—	—	—	1	—
261 Tobago Street (F.L.) ...	12	—	12	—	—	12	—	—	—	9	—	—	1	2	—
2 Francis Street (F.L.) ...	11	—	11	—	—	11	—	—	—	10	1	—	—	—	—
6 Francis Street (F.L.) ...	11	—	11	—	—	11	—	—	—	11	—	—	—	—	—
10 Francis Street (F.L.) ...	8	—	8	—	—	8	—	—	—	7	1	—	—	—	—
14 Francis Street (F.L.) ...	8	—	8	—	—	8	—	—	—	6	1	1	—	—	—

Properties represented in 1936—

110 Holm Street (F.L.) ...	10	—	10	—	10	—	—	—	—	6	—	—	4	—	—
26 College Street (F.L.) and 14 Shuttle Street (F.L.)	21	—	21	—	21	—	—	—	—	10	9	—	2	—	—
140 West Graham Street (F.L.) ...	3	—	—	3	2	—	—	—	1	—	—	—	—	2	Basement Houses.
111 Gallowgate (F.L.) ...	6	6	—	—	6	—	—	—	—	4	1	—	1	—	—
359 Gallowgate (F.L.) ...	9	9	—	—	9	—	—	—	—	8	1	—	—	—	—
35 Nicholas Street (F.L.) ...	27	27	—	—	27	—	—	—	—	17	7	—	—	1	2
75 Clydeferry Street (F.L.) ...	24	24	—	—	24	—	—	—	—	19	2	—	1	—	2
53 Clydeferry Street (F.L.) (North Tenement) (First Flat) ...	3	3	—	—	3	—	—	—	—	3	—	—	—	—	—
14 Milton Street (F.L.) ...	12	12	—	—	12	—	—	—	—	10	—	1	1	—	—

DETAILED STATEMENT SHOWING FURTHER ACTION TAKEN WITH REGARD TO REPRESENTATIONS
MADE IN YEARS 1933 TO 1936.—Continued.

PROPERTY.	NUMBER OF HOUSES.						NUMBER OF HOUSES.						FAMILIES REHOUSED.						REMARKS.
	Number of Houses Represented.	Closing Orders.	Demolition Orders.	Not to be used for Human Habitation.	To be rendered fit for Human Habitation.	Closed.	Demolished.	Rendered Fit and Occupied.	Converted into Business Premises.	Still Occupied.	Rehousing Scheme.	Substituted for Families Transferred.	"Intermediate" Scheme.	Private Property.	Unknown.	Unoccupied at date of Representation.			
65, 67 Renton Street (F.L.)	16	16	—	—	—	16	—	—	—	—	13	—	—	1	2	—	Main Door House Basement House.		
1620 Maryhill Road (F.L.) ...	1	—	—	1	—	—	—	—	—	—	1	—	—	—	—	—			
Canal Bank, Lock 22	1	—	1	—	—	1	—	—	—	—	—	—	—	1	—	—			
12 Windsor Terrace (F.L.) ...	1	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—			
799-801 Springburn Road (F.L.) ...	13	13	—	—	—	13	—	—	—	—	12	—	—	1	—	—			
763 Duke Street East (B.L.)	8	8	—	—	—	—	8	—	—	—	7	—	—	2	1	—			
763 Duke Street West (B.L.)	6	—	6	—	—	—	6	—	—	—	4	—	—	—	—	—			
1, 2, and 3 Manitoba Place (F.L.) ...	4	—	—	4	—	4	—	—	—	—	3	—	—	1	—	—			
4, 5, and 6 Manitoba Place (F.L.) ...	4	—	—	4	—	4	—	—	—	—	3	—	—	—	1	—			
7 Manitoba Place (F.L.) and 67 Janefield Street (F.L.)	6	—	—	6	—	6	—	—	—	—	6	—	—	—	—	—			
44 Holywell Street North (B.L.) ...	4	—	4	—	—	—	4	—	—	—	3	—	—	—	1	—			
44 Holywell Street Mid (B.L.)	4	—	4	—	—	—	4	—	—	—	4	—	—	—	—	—			
44 Holywell Street South (B.L.) ...	5	—	5	—	—	—	5	—	—	—	5	—	—	—	2	2			
30, 32, 34 Dale Street (F.L.) ...	7	—	7	—	—	7	—	—	—	—	3	—	—	2	1	—			
1 Anson Street (F.L.)	8	—	8	—	—	8	—	—	—	—	7	—	—	—	—	—			
14 Old Dalmarock Road (F.L.) ...	20	20	—	—	—	20	—	—	—	—	19	—	—	1	—	—			
15 Hozier Street (B.L.)	9	—	9	—	—	—	9	—	—	—	8	—	—	1	—	—			
29 Tobago Street (B.L.)	4	—	4	—	—	—	4	—	—	—	4	—	—	—	—	—			
37 Tobago Street (B.L.)	4	—	4	—	—	—	4	—	—	—	3	—	—	1	—	—			
7, 9 Orkney Street (F.L.)	26	26	—	—	—	—	26	—	—	—	25	1	—	—	—	—			
17 Orkney Street (F.L.)	24	—	24	—	—	—	24	—	—	—	17	4	3	—	—	—			

HOUSING ACTS.

*Number of houses represented since 1923 and
action taken.*

Year. Parlia- mentary Road Scheme	Number of Houses represented.			Number of these Houses actually closed in each Year.		
	Under Slum Clearance Schemes*	Under Closing and Demolition Orders	Together.	Slum Clearance Schemes.	Closing and Demolition Orders.	Together.
(1917) ...	121	—	121	—	—	—
1923 ...	1,858	—	1,858	163	—	163
1924 ...	—	—	—	528	—	528
1925 ...	—	7	7	385	—	385
1926 ...	1,052	2	1,054	504	2	506
1927 ...	2,125	73	2,198	768	14	782
1928 ...	—	80	80	750	92	842
1929 ...	1,288	166	1,454	952	84	1,036
1930 ...	—	247	247	1,056	254	1,310
1931 ...	131	559	690	924	372	1,296
1932 ...	393	505	898	412	601	1,013
1933 ...	573	872	1,445	535	620	1,155
1934 ...	786	2,126	2,912	263	1,437	1,700
1935 ...	159	2,011	2,170	711	2,028	2,739
1936 ...	131	402	533	330	1,062	1,392
1937 ...	44	1,228	1,272	264	1,039	1,303
	8,661	8,278	16,939	8,545	7,605	16,150

* The date of the Clearance Resolution by the Corporation has been taken as the year of representation. The 1928 Scheme is thus included against the year 1927.

SLUM CLEARANCE AND REHOUSING.

During the post-war period the Corporation has represented a total of 16,939 houses under the various Housing Acts. Of these, 8,661 were dealt with by clearance schemes and 8,278 by Closing

or Demolition Orders. The following tables show separately the position with regard to these houses as at the end of 1937:—

HOUSES DEALT WITH UNDER CLOSING AND DEMOLITION ORDERS.

Year.	NUMBER OF HOUSES.					
	No. of Houses represented.	Closed.	Demolished.	Converted to Business Premises	Rendered Fit and Occupied.	Still Occupied.
1924-1930— (Under 1925 Act)	448	75	360	7	6	—
1930— (Under 1930 Act)	127	34	85	—	8	—
1931	559	120	426	1	12	—
1932	505	120	376	7	2	—
1933	872	296	564	—	10	2
1934	2,126	527	1,578	4	14	3
1935	2,011	783	1,139	—	4	85
1936	402	266	133	1	1	.1
1937	*1,228	521	182	—	—	519
Totals	8,278	2,742	4,843	20	57	610

* Includes 6 houses demolished by Proprietor before decision made.

HOUSES DEALT WITH UNDER SLUM CLEARANCE SCHEMES.

SCHEME.		NUMBER OF HOUSES.				Total Houses in Scheme.
		Demolished.	Converted to Business Premises.	Closed.	Still Occupied.	
Parliamentary	Road					
Scheme		121	—	—	—	121
1923 Scheme		1,858	—	—	—	1,858
1926 Scheme		1,052	—	—	—	1,052
1927 Scheme		1,019	—	—	—	1,019
1928 Scheme		1,106	—	—	—	1,106
1930 Scheme		1,288	—	—	—	1,288
Old Shettleston	Road					
Area		131	—	—	—	131
Landressy Street Area		168	—	—	—	168
Garscube Road Area		225	—	—	—	225
Garnagad Road Area		573	—	—	—	573
Dalmarnock Road Area		353	—	26	33	412
Whitehall Street Area		90	—	—	—	90
William Street Area		161	—	—	—	161
Shaftesbury Lane Area		11	—	24	—	35
Green Street Area		11	—	15	—	26
Warp Lane Area		62	—	—	—	62
Eastvale Place Area		50	—	—	—	50
Castlebank Street Area		89	—	20	—	109
Burnside Street Area		32	—	59	14	105
Gallowgate (back land)						
Area		—	—	—	26	26
Paisley Road West Area		—	—	1	43	44
		8,400	—	145	116	8,661

Further details of schemes which were not completed at the end of 1936 and of new schemes commenced during the year are given in the following notes:—

(a) *Dalmarnock Road Clearance Area*.—During the year 55 houses were closed and 44 were demolished.

No. of Houses.	One Apt.	Two Apts.	Three Apts.	Four Apts. and over.	Total.
Closed and demolished prior to 31st December, 1935	28	28	1	—	57
Closed at commencement of scheme and demolished in 1936	2	—	1	—	3
Closed at commencement of scheme and not demolished at 31st December, 1937	1	—	—	—	1
Closed in 1935 and demolished in 1936	33	28	6	—	67
Closed in 1936 and demolished in 1936	63	93	26	—	182
Closed in 1936 and demolished in 1937	2	1	—	—	3
Closed in 1936 and not demolished at 31st December, 1937	4	6	1	—	11
Closed in 1937 and demolished in 1937	21	18	2	—	41
Closed in 1937 and not demolished at 31st December, 1937	5	9	—	—	14
Still in occupation at 31st December, 1937	17	15	1	—	33
	176	198	38	—	412

No. of Families.	Prior to 31/12/36.	During 1937.	Total.
Transferred to Rehousing Schemes	293	48	341
For whom " Substitution " arranged	26	5	31
Who did not take up Scheme Houses and removed elsewhere	16	5	21
	335	58	393
Still to be provided for at 31st December, 1937 ... ..	...	...	35
			428

(b) *Shaftesbury Lane Clearance Area*.—All the houses in this scheme have been closed. To complete the scheme 24 houses have still to be demolished.

No. of Houses.	One Apt.	Two Apts.	Three Apts.	Four Apts. and Over.	Total.
Closed at commencement of scheme and demolished in 1937	2	—	—	—	2
Closed in 1936 and demolished in 1937	1	7	—	—	8
Closed in 1936 and not demolished at 31st December, 1937	3	20	—	—	23
Closed in 1937 and demolished in 1937	—	1	—	—	1
Closed in 1937 and not demolished at 31st December, 1937	1	—	—	—	1
	7	28	—	—	35

No. of Families.	Prior to 31/12/36.	During 1937.	Total.
Transferred to Rehousing Schemes	28	2	30
For whom "Substitution" arranged	1	—	1
Who did not take up Scheme Houses and removed elsewhere	2	—	2
	31	2	33

(c) *Green Street Clearance Area*.—In this scheme which is of 26 houses the demolition of 11 houses was carried out during the year, leaving 15 houses still to be demolished.

No. of Houses.	One Apt.	Two Apts.	Three Apts.	Four Apts. and Over.	Total.
Closed in 1936 and not demolished at 31st December, 1937	2	—	1	—	3
Closed in 1937 and demolished in 1937	—	11	—	—	11
Closed in 1937 and not demolished at 31st December, 1937	9	1	2	—	12
	11	12	3	—	26

No. of Families.	Prior to 31/12/36.	During 1937.	Total.
Transferred to Rehousing Schemes	1	22	23
For whom "Substitution" arranged	2	2	4
Who did not take up Scheme Houses and removed elsewhere	—	1	1
	3	25	28

(d) *Castlebank Street Clearance Area*.—During the year 91 houses were closed and 89 demolished. To complete the scheme 20 houses now closed have to be demolished.

No. of Houses.	One Apt.	Two Apts.	Three Apts.	Four Apts. and Over.	Total.
Closed at commencement of scheme and demolished in 1937	1	—	—	—	1
Closed in 1936 and demolished in 1937	12	5	—	—	17
Closed in 1937 and demolished in 1937	25	45	1	—	71
Closed in 1937 and not demolished at 31st December, 1937	20	—	—	—	20
	58	50	1	—	109

No. of Families.	Prior to 31/12/36.	During 1937.	Total.
Transferred to Rehousing Schemes	17	79	96
For whom "Substitution" arranged	—	9	9
Who did not take up Scheme Houses and removed elsewhere	1	7	8
	18	95	113

(e) *Burnside Street Clearance Area*.—This area consists of 105 houses. During the year 91 houses were closed. Of that number 32 were demolished.

No. of Houses.	One Apt.	Two Apts.	Three Apts.	Four Apts. and Over.	Total.
Closed in 1937 and demolished in 1937	1	31	—	—	32
Closed in 1937 and not demolished at 31st December, 1937	20	35	4	—	59
Still in occupation at 31st December, 1937	10	4	—	—	14
	31	70	4	—	105

No. of Families.				During 1937.
Transferred to Rehousing Schemes	...	...		80
For whom " Substitution " arranged	...	...		1
Who did not take up Scheme Houses and removed elsewhere	...	...	...	11
Still to be provided for at 31st December, 1937	...			15
				<hr/> 107 <hr/>

(f) *Gallowgate (Back Land) Clearance Area*.—As was stated in the Annual Report last year this area consists of 26 houses, eight of one apartment, 16 of two apartments, and two of three apartments. No action was taken during the year with regard to the closing or demolition of any of the houses.

(g) *Paisley Road West Clearance Area*.—On 23rd December, 1937, the Corporation agreed to secure the clearance of the area by purchasing the land (including the buildings thereon) and the adjoining land and buildings thereon with a view to the satisfactory development of the area. The following table shows the position at 31st December, 1937:—

No. of Houses.					One Apt.	Two Apts.	Three Apts.	Four Apts. and Over.	Total.
Closed at commencement of scheme and not demolished in 1937					—	1	—	—	1
Still in occupation at 31st December, 1937					7	32	4	—	43
					7	33	4	—	44

No. of Families.			
To be provided for at 31st December, 1937	...		46
			<hr/> 46 <hr/>

INSPECTION OF REHOUSING SCHEMES BY
NURSE INSPECTORS.

By Dr. W. C. GUNN.

Bug Infestation and Cleanliness.—The number of houses in the various rehousing schemes reported upon is 13,676. Of these, 11,584 are occupied by tenants who have been removed from slum clearance areas, and 2,092 by tenants who have obtained occupancy of their houses by substitution and who have not removed to the new houses from condemned properties. There are 18 nurse inspectors supervising the rehousing schemes and the object of their supervision has been to maintain a high standard of cleanliness and prevent infestation of houses by the bed bug. As is well known, the prevention of bed bugs goes hand in hand with domestic cleanliness.

In recent years much attention has been paid to the prevention of bed bug infestation throughout the country and many large local authorities have relied on the use of the lethal gas hydrocyanic acid, which is also very dangerous to human beings, as their chief weapon against the bed bug. This dangerous gas has not been used in Glasgow. Those local authorities expose the furniture of the tenants who are being removed from the slums to a high concentration* of hydrocyanic acid gas generated in airtight furniture vans. This entails considerable cost and requires an expert staff for its application. There is no doubt that this gas kills the bugs that are present in the furniture, but, unless the tenants are followed up in their new homes by trained nurse inspectors, furniture again becomes infested, and it has been the common experience throughout the country where the hydrocyanic acid gas process is in use that re-infestations have been extremely frequent. In Glasgow the prevention of bug-infestation since the inauguration of the service of nurse inspectors has been steadily progressive and the returns for 1937 are the best of any year so far.

Of the 13,676 houses inspected by the nurse inspectors 68.1 per cent. were clean, 31.2 per cent. were fair, and 0.7 per cent. were classified as dirty. This small percentage of dirty houses represents in all 96 houses. Table A which is similar to that included in the Reports for the past three years, shows in detail the main features of the survey of the rehousing schemes made during the year.

It will be observed from Table I. that evidence of the presence of the bed bug was found in 722 of the 13,676 houses, or in 5.3 per cent. of these houses, compared with 6.3 per cent. in 1936. In 253 of that number, however, there was only a trace of the presence of bed bugs, that is to say, no evidence of living bed bugs was present, and the majority of these cases was found among tenants newly removed from old to new houses. In all instances the evidence pointed to past infestation of the furniture while the tenants lived in the slums and the "trace" of infestation was easily removed by cleansing when the attention of the tenants was directed to the condition by the nurse inspectors. In 165 of the 722 houses classified as "Medium Infestation" the bed bug was confined to articles of furniture and was easily destroyed by cleansing, but in 304 of them the bed bug had gained a foothold on the walls of the houses and all these cases are regarded as of a serious nature, because the presence of the bed bug on the structures of the walls is a threat to the whole building. Unless such cases are tackled rigorously at the beginning, infestation will spread rapidly. Disinfestation of these houses was carried out in co-operation with the Maintenance Section of the Housing Department, and in all of them complete eradication was accomplished. Such cases are usually discovered at an early stage of the infestation by the nurse inspectors who report the condition to the Maintenance Department. The tradesmen from that Department remove the infested woodwork from the walls and apply the blow-lamp directly or a contact insecticide. Complete eradication of the bed bug has been effected in all cases because of this early detection by the nurse inspectors and the necessity for general fumigation of any of these houses by a lethal gas has practically vanished. This striking result has been brought about by the follow-up system of the nurse inspectors.

The tenants throughout the rehousing schemes are always ready to co-operate with the officials from the Health Department and all are anxious to maintain their new homes free from vermin of any sort and also to preserve the amenities of the Corporation property.

In Table B the progress which has been made during the past four years in the prevention of bug infestation is shown, and it is interesting to note that infestation which was 10.7 per cent. in 1934 was 5.3 per cent. in 1937. Serious infestation has fallen in that period from 7.1 per cent. to 2.2 per cent. throughout the rehousing schemes, and this is the true index of the progress made in the prevention of bug-infestation in Glasgow by the follow-up system carried out by the nurse inspectors who are thoroughly trained in the biology of this pernicious insect.

TABLE A.
REHOUSING SCHEMES, 1937.
CONDITION AS TO CLEANLINESS AND BUG-INFESTATION.

Type of Tenancy.	Total Number of Houses.	Condition as to Cleanliness.			Number of Houses in which Bugs were found during 1937.			Number of Houses in which Bugs re-appeared during the Year.	Number of Seriously Infested Houses treated by Fumigation with SO ₂ .	Number of Seriously Infested Houses dealt with in co- operation with the City Improvements Department.
		Clean.	Fair.	Dirty.	Trace of Bugs.	Medium Infestation.	Serious Infestation.			
Slum Clearance Tenants ...	11,584	7,805 = 67.3%	3,699 = 31.9%	80 = 0.8%	220 = 1.9%	140 = 1.2%	271 = 2.4%	10	—	265
					631 = 5.5%					
Tenants substi- tuted into Re- housing Schemes from Houses other than Slum Clearance Areas	2,092	1,509 = 72.1%	567 = 27.1%	16 = 0.8%	33 = 1.5%	25 = 1.2%	33 = 1.5%	—	1	30
					91 = 4.3%					
Totals ...	13,676	9,314 = 68.1%	4,266 = 31.2%	96 = 0.7%	253 = 1.8%	165 = 1.2%	304 = 2.2%	10	1	295
					722 = 5.3%					

Definitions of the Varying Degrees of Bug-Infestation shown in this Table.

- (1) *Trace*—Old hatched eggs or casts, but no living bugs, in beds, furniture, pictures, or other household belongings. No structure of building affected.
- (2) *Medium Infestation*—Living bugs or eggs (identified as such by lens) found in beds, furniture, pictures, or other household belongings, and readily cleansed by tenants. No structure of building affected.
- (3) *Serious Infestation*—Living bugs or eggs, or both, *i.e.*, breeding taking place, in beds, furniture, or pictures, and also in structures of the apartments such as picture rails, skirting or door facings, etc.

TABLE B.
PROGRESS OF BUG-INFESTATION PREVENTION IN
REHOUSING SCHEMES.

					Number of Houses in which Bed Bugs were found.		
					Trace of Bugs.	Medium Infestation.	Serious Infestation.
1934	...	...	...	8,670	104 1.2%	210 2.4%	612 7.1%
					Total, 926=10.7%		
1935	...	...	...	10,576	218 2.1%	368 3.5%	378 3.6%
					Total, 964=9.1%		
1936	...	...	...	12,803	220 1.7%	296 2.3%	295 2.3%
					Total, 811=6.3%		
1937	...	...	...	13,676	253 1.8%	165 1.2%	304 2.2%
					Total, 722=5.3%		

CONDITIONS AS TO CLEANLINESS IN SLUM CLEARANCE REHOUSING SCHEMES.

Details are given in preceding annual reports of the duties undertaken by the nurse inspectors of the Department in supervising the condition of the houses provided by the Corporation for families transferred from clearance areas. Generally speaking, satisfactory tenants are visited once in three months while others are visited more frequently. During 1937 the nurse inspectors made 63,238 primary visits, the condition of the houses being recorded at the time of the visit as—"clean" 43,849; "fair" 17,467; "unsatisfactory" 1,732; "dirty" 190. Further visits numbering 3,264 were made to the less satisfactory tenants to ensure that the instructions given as to cleansing had been duly carried out.

At the beginning of the year 12,649 households were under supervision and at the end of the year 13,673—an increase of 1,024.

The number of new tenants was 1,458, while there were 434 removals or about 3.2 per cent. of the total occupancies.

No. of tenants under supervision at 1st January, 1937	12,649
Of which evicted or left owing rent during 1937 ...	213
Of which left voluntarily during 1937 ...	192
	<hr/> 405
Of which remaining at 31st December, 1937 ...	12,244
No. of tenants obtaining entry during 1937 ...	1,458
Of which evicted or left owing rent during 1937 ...	14
Of which left voluntarily during 1937 ...	15
	<hr/> 29
Of which remaining at 31st December, 1937 ...	1,429
Total number of tenants remaining as at 31st December, 1937 ...	<hr/> 13,673 <hr/>

For the purpose of the following analyses the general cleanliness of each household as recorded at the beginning of the year or at date of entry and at the end of the year or at the date of removal has been used.

In the first analysis the changes in the condition of the 12,244 households which were under supervision throughout the whole year are shown.

Condition at beginning of year :—				Condition at end of Year.			Totals.	Group Per- centages.
				Clean.	Fair.	Dirty.		
Clean	...	...	...	7,752	362	1	8,115	66.3
Fair	...	...	...	808	3,185	43	4,036	33.0
Dirty	...	...	...	1	48	44	93	0.7
Totals	...	...	...	8,561	3,595	88	12,244	100.0
Group Percentages	...	...	...	69.9	29.4	0.7	100.0	—

It will be noted that considerable changes have taken place in the classification of individual houses. The proportion of households noted as "clean" at the beginning of the year was 66.3 per cent. as against 69.9 per cent. at the end, while the respective percentages of those designated as "fair" were 33.0 per cent. and 29.4 per cent. The proportion of households classified as "dirty" was the same at the beginning and at the end of the year, viz., 0.7 per cent. "Fair" tenants numbering 808 and one "dirty" tenant had progressed sufficiently during the year to be classified as "clean" and 48 "dirty" tenants to be classified as "fair." On the other hand 362 tenants who had been classified as "clean" at the beginning of the year were transferred to the "fair" category and one hitherto "clean" tenant and 43 of the "fair" tenants were relegated to the

"dirty" category. The majority of the tenants (10,981), however, showed no change—7,752 being reported as "clean," 3,185 as "fair" and 44 as "dirty" both at the beginning and at the end of the year.

A similar table is given below for the 1,429 tenants who obtained entry during the year and who were still resident in the schemes at the close.

Condition at date of entry—					Condition at end of Year.			Totals.	Group Per-centages.
					Clean.	Fair.	Dirty		
Clean	...	...	...	...	728	106	—	834	58.4
Fair	...	...	...	...	42	542	—	584	40.9
Dirty	...	...	...	...	1	1	9	11	0.7
Totals	...	...	...	...	771	649	9	1,429	100.0
Group Percentages	...	...	...	...	54.0	45.4	0.6	100.0	—

Here again it will be observed that the majority of the tenants have remained in the category in which they were placed on entry to the schemes. Against the improvement noted by 42 "fair" tenants and one "dirty" tenant being transferred to the "clean" category and one "dirty" tenant becoming "fair" there is to be recorded the fact that 106 tenants who were designated "clean" on entry were classified as "fair" at the close of the year. The standard of cleanliness of the tenants securing entry during the year is not as high as that of the tenants who have been in residence for the full year—54.0 per cent. as against 69.9 per cent. "clean," 45.4 per cent. as against 29.4 per cent. "fair" and 0.6 per cent. as against 0.7 per cent. "dirty."

The condition prior to removal of the houses occupied by families who were evicted or left owing rent and by tenants removing voluntarily during the year is compared in the following table:—

Condition at date of removal—					Tenants Evicted during 1937.		Tenants Removing Voluntarily during 1937.	
					Number	Group Per-centage.	Number.	Group Per-centage.
Clean	...	...	...	...	91	40.1	148	71.5
Fair	...	...	...	...	131	57.7	58	28.0
Dirty	...	...	...	...	5	2.2	1	0.5
					227	100.0	207	100.0

The composition of the group of tenants who removed voluntarily bears favourable comparison with the general standard but that of the tenants evicted is considerably below the average.

Of the 13,673 houses occupied at the end of the year 9,332 were recorded as "clean," 4,244 as "fair" and 97 as "dirty," representing 68.3 per cent., 31.0 per cent. and 0.7 per cent. of the total. The corresponding percentages for occupancies as at the end of 1936 were 66.0, 33.2 and 0.8.

REHOUSING OF TUBERCULOUS FAMILIES.

By a resolution of the Corporation made in 1929, 10 per cent. of the "Intermediate" houses were set aside for families where a tuberculosis individual lives under overcrowded conditions. The allocation of the houses is made by the General Manager, City Improvements Department, on the recommendation of the Medical Officer of Health, and the following table shows the position at 31st December, 1937, of the applications recommended since the inception of the scheme:—

	Year Recommended.		
	1929-36	1937	Total
Recommendations	2,678	308	2,986
1. <i>Rehoused</i>	1,115	42	1,157
2. <i>No further action to be taken</i> —			
Income over "Intermediate" scale and refuse ordinary Corporation house	8	—	8
Refuse house offered	33	4	37
Left Glasgow	15	—	15
Do not now wish rehoused	31	—	31
Patient dead	135	—	135
City Improvements Department report they will take no further action ...	11	—	11
No tuberculous patient in family ...	8	—	8
Rehoused in non-Corporation houses on own account	63	—	63
	304	4	308
3. <i>Cannot afford "Intermediate" rentals</i> —			
Waiting for Slum Clearance Houses by substitution	41	—	41
Cannot pay rental of scheme desired ...	3	—	3
Cannot afford "Intermediate" rentals	106	—	106
Wish application held over meantime	50	—	50
Unsatisfactory reference	27	—	27
Will only take house which does not relieve overcrowding	12	—	12
	239	—	239

4. *Position uncertain*—

City Improvements Department still to report	246	262	508
Application lapsed	369	—	369
No reply to p.c. from City Improvements Department	78	—	78
Gone away and cannot be traced	39	—	39
	732	262	994

5. *Waiting for Rehousing*—

Waiting for particular schemes	179	—	179
Overcrowding not serious—not urgent	21	—	21
Waiting	88	—	88
	288	—	288

SUMMARY OF FAMILIES REHOUSED AT 31ST DECEMBER, 1937.

Year recommended		Rehoused during									Total
		1929	1930	1931	1932	1933	1934	1935	1936	1937	
1929	...	68	40	25	5	5	4	4	—	—	151
1930	...	—	22	49	13	6	7	2	1	1	101
1931	...	—	—	26	44	8	7	2	2	—	89
1932	...	—	—	—	23	16	14	4	8	2	67
1933	...	—	—	—	—	18	28	9	6	3	64
1934	...	—	—	—	—	—	144	91	24	4	263
1935	...	—	—	—	—	—	—	166	78	30	274
1936	...	—	—	—	—	—	—	—	63	43	106
1937	...	—	—	—	—	—	—	—	—	42	42
		68	62	100	85	53	204	278	182	125	1,159

RENT AND MORTGAGE INTEREST (RESTRICTIONS) ACTS,
1920 TO 1923.

Applications for Certificates by Tenants.—During the year 44 applications for certificates, in terms of Section 2 (2) of the principal Act, were received, compared with 72 for 1936. Of these, 20 were cancelled, 10 were refused and 14 granted, all in respect that the houses were not in a reasonable state of repair.

The following summary shows the distribution of the applications throughout the several administrative divisions, and gives comparative figures for each year since the Act came into operation:—

GLASGOW, 1937.—APPLICATIONS FOR CERTIFICATES UNDER SECTION 16 (2) OF THE INCREASE OF RENT AND MORTGAGE INTEREST (RESTRICTIONS) ACT, 1920.

Division.	Refused.	Granted in respect that Houses were—	
		(1) Not in all respects reasonably fit for human habitation.	(2) Not in a reasonable state of repair.
Central	1	—	1
Northern	7	—	8
Eastern	—	—	3
South-Eastern	2	—	1
South-Western	—	—	1
City	10	—	14
		14	

1920 (Oct. to Dec.) ...	147	263	459
1921-1925	219	434	653
1926-1930	29	200	229
1931	6	121	98
1932	12	126	95
1933	8	—	48
1934	6	—	59
1935	17	—	105
1936	4	—	65
1937	10	—	14

Applications for Reports by House Factors and Owners.—In Section 5 (2) of the 1923 Act it is provided that where a certificate has been issued by the Sanitary Authority, in accordance with the provisions of Section 2 (2) of the principal Act of 1920, and the house factor or owner afterwards executes the repairs required to put their houses into a reasonable state of repair, he shall be entitled to receive a report to that effect on making application to the Sanitary Authority, and on payment of a fee of one shilling. During the year, 5 applications were received, all of which were refused.

The following summary shows the distribution of the applications throughout the several administrative divisions, and gives comparative figures for previous years:—

GLASGOW, 1937. — APPLICATIONS FOR REPORTS BY HOUSE FACTORS OR OWNERS UNDER SECTION 5 (2) RENT AND MORTGAGE INTEREST (RESTRICTIONS) ACT, 1923.

Division.						Applications.	
						Granted.	Refused.
Central ... ..	...	...	...	...	...	—	—
Northern ... ..	...	...	...	...	...	—	3
Eastern ... ..	...	...	...	...	...	—	2
South-Eastern ... ..	...	...	...	...	...	—	—
South-Western ... ..	...	...	...	...	...	—	—
						—	5
						5	
1923-1925 ... ..	...	...	...	...	...	40	1
1926-1930 ... ..	...	...	...	...	...	6	2
1931 ... ..	...	...	...	...	...	6	1
1932 ... ..	...	...	...	...	...	36	1
1933 ... ..	...	...	...	...	...	13	—
1934 ... ..	...	...	...	...	...	14	—
1935 ... ..	...	...	...	...	...	37	1
1936 ... ..	...	...	...	...	...	9	4
1937 ... ..	...	...	...	...	...	—	5

SECTION IX.

BACTERIOLOGICAL LABORATORY.

Report by Dr. W. R. WISEMAN, City Bacteriologist.

The specimens submitted and reported upon in 1937 numbered 44,759, the figure for the previous year being 43,493. The summary at the end shows that the sources of the specimens were Public Health Department (26,808), Medical Practitioners (15,437), and Other Local Authorities (2,514). The category "Medical Practitioners" comprises private practitioners (the majority) and certain institutions in the City other than those of the Corporation, the specimens relating to the possibility of infectious disease. The nature of the work carried on is best seen by classifying it as follows:—

(1) *Specimens from Cases of Suspected Infectious Disease.*—These constitute the bulk of the routine work, and are submitted for diagnosis in relation to the various forms of tuberculosis, diphtheria, enterica fevers, dysentery, venereal diseases, ophthalmia neonatorum, scarlet and puerperal fever, various forms of meningitis, pneumonia, anthrax, plague (in rats), and undulant fever. The routine work also involves the examination of contacts and the investigation of possible sources of infection in connection with epidemic outbreaks of disease.

(2) *Miscellaneous Investigations.*—These differ from the preceding group in that no particular bacterial cause is suggested by the clinician. Many of them, therefore, call for general bacteriological scrutiny, and sometimes require extended work with repeated specimens. The materials are such as (a) intestinal contents and urine for evidence of infection of more unusual types; (b) food-stuffs as to fitness for consumption, or in connection with illness suspected to be related to their consumption, and cases of illness connected therewith; (c) skin, hair, etc., for parasites; (d) tissues for evidence of tumour formation or other change of structure; (e) blood and other materials for research in obscure cases.

(3) *Examination of Water and Milk Supplies.*—Samples of the City water supplies are taken at regular intervals from distributing pipes and from the Gorbals, Mugdock, and Craigmaddie reservoirs for examination of their bacterial content with respect to maintenance of their standard of purity. Analyses of the water in the ponds of the public baths are also made at regular intervals and reported to the Baths Department. Examination of the milk supply of the City and the City's hospitals constitutes a considerable part of the routine work of the laboratory. The supplies are tested in regard to bacterial content as a measure of purity and in regard to tuberculous infection.

(4) *Biological Tests.*—These tests are an essential part of the procedure in examining milk for the presence of the tubercle bacillus, and are commonly used for the detection of this organism in pleural and cerebro-spinal fluids, sputum, and urine. They are employed to distinguish the bovine from the human type of tubercle bacillus and to determine the type of infecting organism in cases of pneumonia in which the appropriate serum for treatment may be indicated by the information so derived. By means of such tests we ascertain the virulence or otherwise of organisms isolated from diphtheria patients, carriers, and contacts, and make the diagnosis of certain infections such as anthrax, infective jaundice, etc.

DIPHTHERIA.

Practitioners sending in swabs for diphtheria receive a fresh outfit along with every report. All reports are based upon microscopical examination of the cultures obtained from the swabs submitted. The results are conveyed by telephone on the morning after the swabs are received, this being followed up by the sending out of a written record of the examination.

During the year, 10,328 swabs were examined for the presence of the diphtheria bacillus, and were derived from patients, from contacts, and from children as a preliminary to admission to the Corporation Country Homes.

(1) *Suspected Cases.*—9,319 swabs were examined, 1,170 being positive, or 12.5 per cent. This compares with 13.1 per cent. in 1936, and 13.8 per cent. in 1935.

(2) *Contacts.*—774 contacts were examined, 48 being positive, or 6.2 per cent.

(3) *Pre-admission Examinations.*—235 swabs from 206 children were examined, with results as follows:—

		Number of Children.	Swabs.	Children with virulent B. diphtheriae.
M.O.H.	...	177	177	2
Practitioners	...	29	58	—

The number 177 from the Health Department were all throat swabs, while those from practitioners were 29 throat and 29 nasal swabs.

Biological and Cultural Tests.—These tests are applied for the purpose of ascertaining the virulence or otherwise of diphtheria-like organisms. Differentiating cultural tests are first applied to establish the identity of such an organism, particularly when it occurs in regions other than the throat, and in those cases which prove to be *Bacillus diphtheriae* the biological test is applied to determine virulence. During the year, 242 cultures were so examined. 187 of these were *B. diphtheriae*, 116 being biologically virulent, and 4 being nasal cultures reported positive and considered virulent on clinical grounds. 67 were non-virulent diphtheria cultures, while 55 were proved by cultural means to be corynebacteria other than *B. diphtheriae*. The sources and results were as follows:—

			Number tested.	Virulent.	Non-virulent.
(a) Throat swabs	...	...	127	64	63
(b) Nasal swabs	...	...	72	46	26
(c) Ear swabs	...	...	32	7	25
(d) Eye swab	...	...	1	—	1
(e) Vaginal swab	...	...	1	1	—
(f) Pre-admission swabs	...	...	8	2	6
(g) Skin swab	...	...	1	—	1
			<u>242</u>	<u>120</u>	<u>122</u>

The identity and source of the 122 non-virulent diphtheria-like organisms are seen in the following table:—

			B. diphtheriae.	B. hofmanni.	B. xerosis.	Total.
Throat	...	...	45	15	3	63
Nose	...	...	9	13	4	26
Ear	...	...	11	5	9	25
Eye	...	...	1	—	—	1
Skin	...	...	—	1	—	—
Pre-admission	...	...	1	4	1	6
			<u>67</u>	<u>38</u>	<u>17</u>	<u>122</u>

The specimens subjected to prolonged tests as above were submitted from the following sources:—

				Virulent.	Non-virulent.
Corporation Fever Hospitals	...	...	...	59	43
Medical Officer of Health	...	...	...	14	10
Practitioners	...	...	...	22	6
Other Hospitals	...	...	...	25	8
				<u>120</u>	<u>67</u>

Types of Diphtheria Bacillus.—As a result of the observations made in the laboratory upon the types of diphtheria bacilli operative in Glasgow, the types associated with the graver forms of the disease have been found rather more frequently during this year. For the first five months there were 9.1 per cent. of *gravis* strains and 54.4 per cent. of the “intermediate” type. In the month of August the percentage of *gravis* strains rose to 11.5 and for the last three months of the year to 12.6, with a maximum in December of 15.3 as contrasted with 9.5 per cent. in December, 1936.

The virulent *gravis*-like Type IV has also been more in evidence this year. It was isolated on 27 occasions in August, and was the cause of a small outbreak of diphtheria with high mortality, associated epidemiologically with the family and customers of an ice-cream vendor.

ENTERICA GROUP.

Examination of Blood.—Agglutination tests for the diagnosis of typhoid and paratyphoid fever were done with 155 specimens of blood from 149 persons.

SOURCES OF MATERIAL AND RESULTS IN BLOOD TESTS.

	Positive typhoid.	Positive para. B.	Doubtful.	Negative.	Total.
Cases of illness	16	16	8	113	153
Contacts ...	—	1	—	1	2
	<u>16</u>	<u>17</u>	<u>8</u>	<u>114</u>	<u>155</u>

Examinations of Excretions.—The total number of specimens examined from cases, convalescents, contacts and carriers was 1,503 (faeces, 802; urine, 701). The positive results in the total number of specimens were:—

				Positive B. typhosus.	Positive B. para. B.
Faeces	...	...	...	29	92
Urine ...	...	...	...	6	20
				<u>35</u>	<u>112</u>

(1) *Typhoid Findings*.—The 35 positives were from 17 cases, 1 contact, and 2 carriers.

(2) *Paratyphoid Findings*.—The 112 positives were from 55 cases, 4 contacts, and 2 carriers.

No outbreak of disease under this group occurred during the year.

DYSENTERY AND FOOD POISONING.

Dysentery.—The increase in the amount of work in relation to dysentery infections that characterised the year 1936 was fully maintained during this year, the total number of specimens received showing an increase of nearly eighteen per cent. if we neglect the Paisley outbreak of 1936. This corresponded with the increased incidence of the disease throughout Britain generally.

For the last four years there has been a definite rise in the Sonne type of infection compared with the Flexner type and last year the Sonne type predominated. This year the patients exhibiting these types were almost equal in number.

Towards the end of the year the services of the laboratory were enlisted in the investigation into an outbreak of dysentery in the Southern General Hospital. Most of our specimens were for clearance, and numerous examinations were proceeding at the close of the year.

The total number of specimens submitted during the year was 995 from 773 persons, including the specimens repeated for clearance. No carriers were detected, elimination of the organisms taking place in the usual short period. Microscopical examinations of the specimens were made in all cases, and dysenteric characteristics, if present, were recorded. The sources of the material and the results of examination are set out in the following table:—

	B. Flexner.	B. Sonne.	E. histolytica.	Total.
Practitioners	15	31	—	250
M.O.H. (suspected cases)	13	11	—	122
M.O.H. (contacts) ...	4	2	—	84
Corporation Hospitals ...	42	21	—	539
	74	65	—	995
	==	==	==	==
Total for 1936 (excluding Paisley)	48	84	1	841
Total for 1935	54	45	1	584

The 74 Flexner results were from 61 patients, and the 65 Sonne results from 62 patients. Seven samples of faeces from 7 patients were examined for the organism of Amoebic dysentery with negative results.

Apart from the outbreak in the hospital already mentioned no localised epidemic of dysentery came to the notice of the laboratory during the year.

A study of dysentery in the Glasgow area, covering the materials submitted to the laboratory from suspected cases from January, 1936, to April, 1937—1379 specimens from 1104 suspected cases—was published by Dr. H. S. Carter in the *Journal of Pathology and Bacteriology* in September, 1937.

Food poisoning.—Several cases of illness thought to be of the nature of food poisoning were investigated in the laboratory during the year. Eighteen samples of suspected foodstuffs were submitted in connection therewith and included corned beef, black pudding, pork hough, salmon paste, prawns, tinned beans, cooked herring and stew. From 40 persons affected 55 specimens were examined, the results of examination of these being as follows:—

		Food-poisoning organisms present.	Repeat positive.	Total samples examined.
Faeces	...	10	—	39
Urine	...	1	—	9
Vomit	...	—	—	4
Blood serum (agglutination test)	...	—	—	3
				<hr/> 55 <hr/>

The following notes on certain features of the various occurrences are of interest:—

(1) During November about 20 patients in Robroyston Hospital were affected with gastro-intestinal illness which, it was thought, might be associated with pies consumed for supper. Eleven samples of excreta from 11 patients were examined and yielded negative results. Those affected recovered quickly and it is noted that these formed only a small percentage of those who consumed the pies with no ill effects. No pies were available for examination.

(2) In no fewer than ten unrelated cases of gastro-intestinal illness where no foodstuff came under suspicion, members of the food-poisoning group of organisms were isolated. These were of the Aertrycke and Newport types of *Salmonella bacilli*.

(3) From the excretâ of one case thought to be dysentery a *Salmonella* organism of food-poisoning type was isolated. From another case initially suspected of being one of typhoid fever a similar bacillus was isolated. The value of bacteriological examinations in the diagnosis of intestinal affections is thus illustrated.

SHELLFISH.

Four samples of periwinkles and one sample of oysters intended for the Glasgow market were examined as to their fitness for human consumption. Forty periwinkles and each individual of the sample of 4 oysters were investigated.

From two of the samples of periwinkles evidence was forthcoming of a greater degree of contamination than is commonly regarded as permissible in this variety of shellfish intended for the market. The other samples of periwinkles and the oysters were found to conform to the required bacteriological standards.

TUBERCULOSIS—HUMAN.

Specimens of sputum in suspected cases of pulmonary tuberculosis were examined as to the presence of the tubercle bacillus for medical practitioners and for the medical officers in charge of the tuberculosis dispensaries in the City. The medical practitioners submitted 2,431 specimens, while 2,925 were reported upon to the Health Department.

Other suspected material such as urine, cerebro-spinal and pleural fluids, pus from gland abscesses, fæces — 189 specimens — were reported upon, largely by means of biological tests.

VENEREAL DISEASES.

The number of specimens examined in 1937 in connection with venereal diseases was 21,371. This total includes 9,706 specimens of blood and 154 cerebro-spinal fluids subjected to the Wassermann Test, and 10,534 specimens of blood to the Kahn Precipitation Test. Many of these specimens as occasion required were examined by

both methods and were thus reported. The Meinicke Clarification Test was also applied on 60 occasions as a control of the results so obtained, and has been found most useful. The total also includes 944 specimens of exudate examined for the presence of *Gonococcus*, 7 specimens of blood for the *Gonococcus* Complement Fixation Test, and 18 smears for *Treponema pallidum*. The Colloidal Gold Test was done on 8 cerebro-spinal fluids.

Wassermann Tests.—This test is used as an aid in the diagnosis of syphilis, and to assist in determining the results of treatment. The method employed is No. 1 Method M.R.C. (Modified), 1929, with certain modifications introduced by Dr. E. J. Wyler in 1932, and published in a report by the Ministry of Health (Reports on Public Health and Medical Subjects, No. 67). The sources of the specimens for this test were as follows:—

Public Health Department	...	...	...	...	4,700
Medical Practitioners of the City	...	...	...	...	1,322
Outside Local Authorities	...	...	...	...	1,217
Local Hospitals and Institutions	...	...	...	...	2,621
					<hr/>
					9,860
					<hr/>

The actual numbers for diagnosis and from patients undergoing treatment in the last four years, with the results of test, are of interest:—

Year.	For diagnosis.	Per cent. positive.	Under treatment.	Per cent. positive.	Total.
1937 ...	5,772	19·6	4,088	42·8	9,860
1936 ...	5,687	18·7	3,932	49·9	9,619
1935 ...	5,845	18·1	4,883	49·0	10,728
1934 ...	6,598	19·4	4,996	49·5	11,585

This table shows a striking drop in the positives under treatment. The figure has not been below 49 since the newer method of testing was adopted in 1932.

As a technical point of importance I would record that the routine Wassermann technique (as above), in spite of its increased sensitiveness, has not rendered an undue number of sera anti-complementary as has been alleged in certain laboratories in England, the percentage of such results being only 0·2. This corresponds to 21 anti-complementary sera out of 9,706 specimens.

Kahn Test.—The great majority of the specimens subjected in the first instance to the Kahn Test were from cases which showed no clinical evidence of syphilis, the test being performed as a routine in connection with patients attending Ante-Natal Clinics, the Clinic

for the Blind, the V.D. Dispensaries for the treatment of gonorrhœa only, and for other purposes. The results obtained with this test from 10,341 specimens submitted by the Health Department and performed as routine tests may be set out as follows:—

				Ante-natal Clinics.	Clinic for the Blind.	Gonorrhœa cases.	Hospitals, &c.
Number	...	...	...	7,855	478	1,994	14
Per cent. positive	...	...	...	1·8	6·8	3·9	—
Per cent. positive in previous years :—							
1936	...	...	...	2·1	8·1	3·4	13·0
1935	...	...	...	1·8	7·3	3·7	4·2
1934	...	...	...	2·7	10·5	5·8	3·2
1933	...	...	...	3·2	11·1	3·6	4·7

These percentages are on the basis of positive results given in both Wassermann and Kahn Tests, the technique of the tests having been subject to no change in the above years.

The decline in positive percentage of ante-natal specimens is maintained even with the large increase in number in 1937, the totals examined in the previous years not varying greatly, being 5,839 (in 1936), 3,334 (in 1935), 3,664 (in 1934), 3,938 (in 1933).

It may be noted that the above two tests are in frequent use on behalf of certain hospitals in relation to collection of blood sera from convalescent measles patients and from prospective blood donors.

Gonococcus Complement Fixation Test.—Research work upon specimens of blood serum was continued this year in conjunction with one of the Clinics in order to evaluate the significance of this test in different clinical conditions and to assess variations in the technique of the test. Sixty-three specimens were utilised for this purpose. The test was applied to 7 specimens submitted for diagnosis.

Examination for Treponema pallidum (V.D.S.).—Microscopical examination was made of 18 specimens submitted, the percentage of positives being 16·6.

Examination for Gonococcus (V.D.G.).—Specimens numbering 944 were examined from cases other than ophthalmia neonatorum. Those for diagnosis gave a positive percentage of 17·0, while 14·6 is the corresponding figure for patients undergoing treatment.

The following table shows in detail the sources of the above materials, and the tests which were applied:—

	Wasser- mann Test.	Kahn Test.	V.D.G. micros.	V.D.S. micros.	Colloidal Gold Test.	Total.
I. Public Health Department—						
Blind Clinic, Tuberculosis Dispensary ...	145	479	8	1	—	633
V.D. Dispensaries (five) ...	3,903	1,994	4	—	2	5,903
Ante-natal Clinics (eleven) ...	425	7,855	299	—	—	8,579
Hospitals, Fever (six) ...	225	13	17	—	1	256
Hospitals, General (two) ...	2	—	—	—	—	2
	4,700	10,341	328	1	3	15,373
II. Medical Practitioners—						
(a) City of Glasgow ...	1,322	65	583	17	4	1,991
(b) Other Local Authorities	1,217	34	33	—	1	1,285
	2,539	99	616	17	5	3,276
III. Local Institutions—						
Lock Hospital ...	637	37	—	—	—	674
Ear, Nose and Throat Hospital	136	—	—	—	—	136
Cancer Hospital ...	58	—	—	—	—	58
Redlands and Elder Hospitals	11	—	—	—	—	11
Samaritan Hospital ...	43	—	—	—	—	43
Royal Hospital for Sick Children—						
(a) Hospital ...	260	—	—	—	—	260
(b) Dispensary ...	265	5	—	—	—	270
Department of Health for Scotland ...	4	—	—	—	—	4
Glasgow Eye Infirmary ...	1,200	52	—	—	—	1,252
Other Institutions ...	7	—	—	—	—	7
	2,621	94	—	—	—	2,715
Total ...	9,860	10,534	944	18	8	21,364

The above total does not include 7 V.D.G. Complement Fixation Tests.

OPHTHALMIA NEONATORUM.

Specimens of exudate from the eyes of 891 suspected cases of ophthalmia neonatorum were examined for the Child Welfare Centres, etc. Since repeated examinations are occasionally made to test the results of treatment, the number stated does not correspond to the actual number of cases.

Specimens from	Number.	Positive.
Medical Practitioners ...	5	1
Medical Officer of Health ...	886	38
	<u>891</u>	<u>39</u>

The positive results refer to the presence of the gonococcus.

The organisms observed microscopically in these specimens are described and reported, as far as possible, to the clinicians to assist in correlating different types of ophthalmia.

STREPTOCOCCAL INFECTIONS.

SCARLET FEVER, ETC.

The laboratory has not been called on to investigate any outbreak of infectious disease due to these organisms this year. Search for them was confined for the most part to isolated sources, such as scarlet fever contacts, cases of mastoiditis, otitis media, suspected puerperal fever, etc. 170 examinations were made with 40 positive results, 3 of which were puerperal cases.

The sources of specimens were as follows:—

		Health Dept.	Medical Practs.	Ear, Nose and Throat Hosp.	Outside Authorities.
Scarlet Fever, &c.	...	42	22	33	16
Puerperal Fever	... ..	22	31	—	4
		—	—	—	—
		64	53	33	20
		—	—	—	—

ANTHRAX.

At the request of practitioners three swabs of material from sores situated on the hand, cheek and upper lip were examined for the presence of the anthrax bacillus, with negative results. In each case *Staphylococcus aureus*, a common causal agent in pustules of the skin, was reported to be present.

No case of disease came to the notice of the laboratory during the year.

PLAGUE.

Since this disease is usually acquired from the bite of a rat flea which has fed on a plague-infected rat, examination of rats from ships and from the harbour form a routine part of laboratory work. During the year 497 rats—243 males, 254 females—were

examined for evidence of this infection, with negative results. The species of rats examined were *Mus decumanus* (137), *Mus rattus* (198), *Mus alexandrinus* (162).

MILK SUPPLY.

I. IN RELATION TO BOVINE TUBERCULOSIS.

All reports as to whether samples of milk contain tubercle bacilli are based on the results of biological tests. The total number of samples for 1937 is 925 as compared with 745 in 1936. The following are the results:—

	Samples.	Tuberculous	% Tuberculous
1. <i>Milk from Town Cows</i> —			
Submitted by Veterinary Surgeon	2	1	50
2. <i>City Milk Supply</i> —			
Obtained by milk and dairy inspectors at consignees' premises—			
(a) Undesignated milks ...	354	24	6·7
(b) Designated milks, sold as such ...	35	—	—
3. <i>Pasteurised Milk</i> —			
Supplied through Child Welfare Centres ...	52	—	—
4. <i>Pasteurised Milk</i> —			
Supplied to Schools ...	121	—	—
5. <i>Hospital Milk Supply</i> —			
These are T.T. and Pasteurised Milks ...	200	—	—
6. <i>Other Local Authorities</i> ...	161	26	16·1

II. IN RELATION TO BACTERIAL CONTENT.

City Milks.—Milks coming into the City are examined for the number of bacteria they contain per millilitre, and in relation to the presence of coliform bacilli. They are sampled at consignees' premises. During the year 402 samples were estimated in this way, and the results as to bacterial count may be compared with those of the previous year, as follows:—

	Number examined.	Samples below maximum of Certified Milk (30,000 per ml.).	Samples below maximum of Standard Milk (200,000 per ml.).	Samples above 200,000 per ml.
1937 ...	402	147 (36·56%)	164 (40·8%)	91 (22·64%)
1936 ...	314	85 (27%)	129 (41%)	100 (32%)

The actual average of bacterial counts of the above results are presented in the following table as indicating degree of purity of production:—

Total number of samples examined—402.

Maximum counts at 37°C. of designated milks (given as a basis for comparison).	Average counts at 37°C. and number of samples involved.	
Below 30,000 per ml. (Certified)	15,146 per ml. for 147 samples	=36.56%
Below 200,000 per ml. (Standard)	79,714 per ml. for 164 samples	=40.8%
Above 200,000 per ml.	373,000 per ml. for 44 samples	=10.95%
	Over a million per ml. for 47 samples	=11.69%

Thus 77.36 per cent. of the samples are of Certified or Standard grade as to count, as compared with 67.8 per cent. in 1936, and 66.2 per cent. in 1935.

Child Welfare Milk.—52 samples of Pasteurised and T.T. (Pasteurised) milk supplied through Child Welfare Centres were examined at weekly intervals. The average count was 15,200 per ml. as compared with 14,180 per ml. in 1936 and 7,600 per ml. in 1935.

School Milk.—121 samples of milk supplied to schools were examined at fortnightly intervals. The average count was 11,760 per ml.

Hospital Milk.—The City hospitals are supplied with milk designated as Tuberculin Tested and Pasteurised. Estimations are made fortnightly for thirteen hospitals. The average counts fell well within the maximum required for the respective grades in all but 25 of the 206 samples examined.

Designated Milk.—In addition to the samples already dealt with, 424 samples of graded milks were examined for the Health Department. Of these, 361 were found to give less than the maximum count allowed for their grade, while 63 exceeded it. The details are subjoined:—

	Samples.	Within maximum count.	Over maximum count.
Certified ...	107	92	15
Pasteurised ...	164	129	35
Standard ...	2	2	—
Tuberculin Tested	138	125	13
T.T. (Pasteurised)	13	13	—
	<hr/> 424	<hr/> 361	<hr/> 63 (14.8%)
1936 ...	342	312	30 (8.7%)

Samples of Certified milk were examined at monthly intervals for the Royal Hospital for Sick Children. Out of 12 samples submitted 11 were up to standard.

The relative maximum bacterial counts for the grades are appended:—Certified, Pasteurised and T.T. (Pasteurised) each 30,000 per ml., Tuberculin Tested and Standard each 200,000 per ml.

WATER EXAMINATIONS.

City Water Supply.—Monthly estimations of bacterial content of samples from Craigmaddie, Mugdock and Gorbals Reservoirs and from the laboratory tap were carried out as in previous years. 70 samples were examined, and the content found to be fairly constant. The bacterial counts were made on agar medium only:—

	Number of samples.	Average count per ml. at 37°C.	Average count per ml. at 22°C.	Samples with streptococci in 30 ml.	
				Faecal.	Non-faecal.
Loch Katrine ...	46	17	29	3	6
Gorbals Reservoir	24	46	157	—	3

During the year there was no unusual departure from the standards of purity associated with these water supplies.

Public Baths Water.—117 samples from 22 swimming ponds were examined and reported to the Baths Department during the year, to gain information upon the effects of filtration and chemical treatment.

The strains of streptococci which were isolated from 14 samples were tested for hæmolytic properties, in each case with negative result. This is in conformity with the experience of other cities.

HISTOLOGICAL EXAMINATION OF TISSUES.

Specimens of tissues were submitted for report upon changes of structure as observed by microscopical examination of thin sections. Some were of the nature of tumours, while others were for evidence of tuberculosis or other change. Five specimens were reported upon.

EXAMINATION OF DISINFECTANTS.

Samples of disinfectants were submitted by the Health Department for the determination of their germicidal power. The method employed was the "British Standard Technique for Determining the Rideal-Walker Coefficient of Disinfectants" issued by the British Standards Institution. Six samples were thus estimated.

BIOLOGICAL LABORATORY.

Some of the commoner infections requiring biological tests were mentioned at the beginning of this Report. In 1937 these tests numbered 1,401.

VISITORS TO THE LABORATORY.

In October the Anniesland Co-operative Society Men's Guild were received in the Lecture Room of the Department, where Dr. Wiseman gave a lecture on "Microbic Enemies of Man, how they are Detected and Counteracted." After a discussion in which several of the members joined, the party proceeded to the Laboratory and were given microscopical and other demonstrations of micro-organisms of everyday importance in public health.

SUMMARY OF THE EXAMINATIONS FOR THE YEAR, 1937.

The examinations performed in the bacteriological laboratory during 1937 numbered 44,759 as compared with 43,493 in the previous year. The sources of materials submitted were as follows:—

	Medical Practs.	Health Dept.	Other Local Auths.
Tuberculosis (Human)—			
Microscopical Examinations—			
Sputum	2,328	2,925	103
Urine	28	71	7
Pus	4	41	2
Pleural effusion	6	14	4
Faeces	2	2	—
Cerebro-spinal fluid	1	—	4
Fluid from chest	—	1	—
Swab	1	1	—
Biological Test	58	104	12
Tuberculosis (Bovine)—			
Milk—			
Microscopical Examination	—	2	2
Biological Test—			
Town Cows	—	2	—
City Milk Supply	—	389	—
Child Welfare Milk Supply	—	52	—
School Milk Supply	—	121	—
Hospital Milk Supply	—	200	—
Miscellaneous Sources	—	—	161

	Medical Practs.	Health Dept.	Other Local Auths.
Typhoid and Paratyphoid Fever—			
Blood (agglutination)	95	22	38
Urine, faeces, blood (cultures)	84	1,208	216
Pus	1	2	—
Dysentery—			
Faeces	143	746	113
Milk	—	—	1
Diphtheria—			
Swabs from suspected cases	7,518	1,376	425
Swabs from contacts	—	774	—
Virulence Tests	34	175	33
Pre-admission swabs	58	177	—
Vincent's Angina—			
Throat swabs from suspected cases	34	4	2
Meningitis—			
Cerebro-spinal fluid	19	4	2
Post-nasal swabs	2	3	—
Scarlet Fever, &c.—			
Cultural Tests for haemolytic streptococci	86	64	20
Ophthalmia Neonatorum			
	5	886	—
Venereal Diseases—			
Wassermann Test	3,943	4,700	1,217
Kahn Test—Ante-natal, &c.	159	10,341	34
Gonococcus Complement Fixation Test	1	2	4
Colloidal Gold Test	4	3	1
Gonococcal Infections other than			
Ophthalmia neonatorum	583	328	33
Treponema pallidum	17	1	—
Anthrax—			
Material from patients	1	2	—
Plague—			
Examination of Rats from Ships, Docks and City	—	497	—
Infective Jaundice—			
Material from patients	—	—	1
Malaria—			
Blood	2	—	—
Bacterial Diagnosis (various diseases)—			
Urine 94 ; faeces 25 ; fluid 1 ; swabs 17 ; pus 25 ; sputum 5 ; miscellaneous 16	143	15	25
Food-poisoning Organisms—			
Examination of foodstuffs	2	11	5
Material from patients	9	43	3
Water—Ships, Households, &c.—			
Analyses	—	12	1

	Medical Practs.	Health Dept.	Other Local Auths.
Milk (Bacterial Content)—			
Under Milk (Special Designations) Order	—	424	—
City Milk Supply	—	402	—
Child Welfare Supply	—	52	—
School Milk Supply	—	121	—
Hospital Milk Supply	—	206	—
Miscellaneous Sources	16	6	41
Blood—			
Cytological Examination by Smears ...	18	4	—
Occult Blood—			
Faeces	2	—	—
Undulant Fever—			
Blood	10	3	2
Histological Examination—			
Tumours and Tissues for Malignancy, &c.	3	1	2
Parasites—			
Swabs, skin, &c.	4	3	—
Chemical Examination—			
Urine	8	25	—
Typhus—			
Serum Test (Weil-Felix)	—	2	—
Vaccine	4	—	—
Identification of Insect	1	—	—
Shellfish—			
Periwinkles (samples 4), Examinations	—	40	—
Oysters (sample 1), Examinations ...	—	4	—
Disinfectants, for Coefficient	—	6	—
Powder, for Dry Rot Spores	—	1	—
	15,437	26,621	2,514
		44,572	
Water Department—			
Tap Water	22		
Reservoirs	48		
	—	70	
Baths Department—			
Water from Swimming Ponds		117	
		44,759	

W. R. WISEMAN.

SECTION X.

FOOD.

FOOD POISONING INFECTIONS, Etc.

Several cases of suspected food poisoning were reported during the year and the following notes were made of the more important of these:—

In February two members of a family of four became ill after eating a black pudding which had been kept over the week-end. The illness, vomiting and diarrhoea, was of short duration. Subsequent bacteriological examination of the remaining portion of pudding showed that it had been kept too long and was decomposing. An organism of the *Salmonella* group was found in one specimen of stools.

On 23rd February a visitor, who had motored up from England that day and was spending the night at a hotel in the city, became acutely ill and was removed to hospital with enteritis. The typical symptoms of sickness, diarrhoea and abdominal colic commenced within three or four hours of a dinner which had included prawns. The profound toxæmia with rapid recovery suggested *Salmonella* infection but bacteriological examination of the stools was negative for any pathogenic organism. Other information indicated that the illness was due to causes other than food infection.

In May, various members of a family became ill after a meal of herring. Samples of the stools and the remainder of the herring were submitted for bacteriological examination but were reported negative for any pathogenic organism. The condition of the herring suggested that it had been kept overlong in a warm cupboard prior to cooking.

On 8th July two members of a family became ill with vomiting, abdominal pain and diarrhoea and one of them was removed to hospital as a case of suspected food poisoning. The suspected article of diet was some boiled beef ham which had been purchased at the local grocer's shop. Specimens of fæces and of the remaining ham were examined bacteriologically with negative results.

In the early hours of 25th August a woman collapsed in the street and was removed to the Royal Infirmary with symptoms of gastro-enteritis. A piece of boiled hough eaten the previous morning was suspected as the cause of the illness as this had been kept for three days after cooking when the weather was rather sultry. Bacteriological examination of the remaining hough and of vomit proved negative.

On 6th September three cases of acute food poisoning were reported, one of which was removed to hospital. The symptoms of sickness, vomiting, abdominal colic and diarrhoea were common to all three cases and followed a meal taken about two hours previously. This meal had consisted of bread and some soup left over from the previous day and reheated. Examination of the enamel-lined pot in which the soup had been kept overnight showed that a small area of the enamel lining of the bottom was burned through. Some of the remaining soup was submitted for bacteriological and chemical analysis but the results were negative both for food poisoning organisms and metallic impurities.

On 20th September seven persons who had had a meal together about 5.30 p.m. were taken ill in the early hours of the following morning with abdominal pain, tenesmus, nausea and diarrhoea. Suspicion was directed to some stew which had been bought and cooked the previous day and warmed up for this meal. Samples of the meat from which this piece had been sold, as also some of the stew, were submitted for bacteriological examination but no pathogenic organisms were found. Faeces were also negative. Chemical analysis of the stew was also made as the enamel of the pot in which the stew had been cooked was found to be broken in places. No arsenic, antimony, tin or any other metallic substance likely to cause poisonous symptoms was found.

AERATED WATERS, Etc.

Only three cases of sickness following the drinking of aerated waters were reported during the year.

The first, in July, was not notified at once and the Department was unable to carry out the usual investigations.

In August a bottle of aerated water was blamed for causing sickness and a faint odour of disinfectant was observed about the stopper. Analysis of the remaining contents showed some Phenols, 5 parts per million, but this was considered to be too minute to cause symptoms of poisoning.

In October attention was again directed to an odour of disinfectant in a bottle of aerated water. On analysis a minute trace of Phenol, 0.75 parts per million, was found, but this amount would be quite harmless to the consumer.

SUMMARY OF OPERATIONS UNDER THE FOOD AND DRUGS (ADULTERATION) ACT; THE MILK AND DAIRIES ACTS; THE MERCHANDISE MARKS ACTS; AND ALLIED ACTS AND ORDERS FOR THE YEAR ENDING 31st DECEMBER, 1937.

The Food and Drugs (Adulteration) Act, 1928.—In the course of the year 1,339 formal and 3,705 informal samples, making a total of 5,044, were submitted to the City Analyst. Of the former, 70 or 5.23 per cent., and of the latter, 109 or 2.94 per cent. were found to be adulterated. As in past years a considerable proportion of the adulteration was due to the use and the excessive use of preservatives. The total number of samples examined comprised 201 different varieties of food and drugs. These are detailed in the table at the end of this section of the Report. Prosecutions were taken in 54 instances, and 49 convictions were recorded. One warranty defence was sustained, one case was unsuccessful, and three were deserted *simpliciter*. Six of the cases were second offences, one the third, two the fourth, one the fifth, and one the sixth offence. The total of the fines imposed amounted to £120 13s. 6d. No occasion arose for any action under Part II. of the Act in relation to margarine, etc. Some traders were advised, and all warnings given were attended to.

ABSTRACT OF TOTAL SAMPLES EXAMINED DURING 1937.

Article.	Informal.		Statutory.		Percentage adulterated.		Percentage of Samples taken in each Group to Total.	
	Taken.	Non-Gen.	Taken.	Non-Gen.	Infor. %	Stat. %	Infor. %	Stat. %
Milk and Cream	2,101	48	805	18	2.28	2.24	56.71	60.12
Milk Products (Butter, Cheese, &c.)	154	2	32	—	1.30	—	4.16	2.39
Meats and Meat Food Products	110	23	175	42	20.91	24.00	2.98	13.07
Cereals, &c.	173	—	56	—	—	—	4.62	4.18
Spirituos Liqueurs	110	12	18	2	10.91	11.11	2.98	1.34
Drugs	315	19	76	4	6.03	5.26	8.51	5.68
Flavourings and Condiments	88	—	41	—	—	—	2.38	3.06
Miscellaneous Foods, &c.	654	5	136	4	0.76	2.94	17.66	10.16
Totals	3,705	109	1,339	70	2.94	5.23	100.00	100.00

ABSTRACT OF INFORMAL AND STATUTORY SAMPLES OF SWEET MILK EXAMINED DURING 1937.

Informal.				Month.	Statutory.			
No. examined.	No. presumed Non-Gen.	Average per-centage Composition.			No. examined.	No. presumed Non-Gen.	Average per-centage Composition.	
		Fat. %	Non-Fat. %				Fat. %	Non-Fat. %
167	2	3.64	8.83	January	72	5	3.50	8.77
183	7	3.56	8.83	February	66	2	3.54	8.78
184	14	3.60	8.84	March	66	1	3.48	8.77
169	6	3.61	8.74	April	61	1	3.54	8.71
152	1	3.59	8.83	May	66	2	3.53	8.74
181	5	3.61	8.86	June	65	1	3.50	8.84
155	—	3.66	8.77	July	60	1	3.65	8.72
177	3	3.71	8.74	August	55	—	3.66	8.71
178	1	3.82	8.77	September	70	—	3.69	8.70
167	4	3.82	8.77	October	69	—	3.81	8.75
179	3	3.79	8.74	November	67	3	3.82	8.65
171	2	3.73	8.78	December	67	2	3.65	8.74
Total No. examined.	Percentage presumed Non-Gen.	Average percentage for year.			Total No. examined.	Percentage presumed Non-Gen.	Average percentage for year.	
		Fat.	Non-Fat.				Fat.	Non-Fat.
2,063	2.32	3.68	8.79		784	2.29	3.61	8.74

Artificial Cream Act, 1929.—This Act requires the Food and Drugs Authority to keep a register of premises where artificial cream is manufactured or sold. In certain circumstances registration is not required. The Act is designed to prevent the sale as cream of any substance manufactured from milk products, such as dried milk and butter, which have been emulsified in a machine with milk or water. Artificial cream is, therefore, a product which can be offered at a cheaper price than genuine fresh cream. There are no names on the register, and no application has been received for registration.

The Public Health (Preservatives, Etc., in Food) Regulations.—Generally the presence of preservatives in food is prohibited. Where it is permissible in certain specified foods, the nature and amount are laid down in Part I. of the First Schedule of the above Regulations. There are also certain colouring matters which may not be

added to articles of food. In 35 instances the amount of preservative found in the samples justified proceedings being taken against the offenders. This compares with 54 offences dealt with last year and is a reduction of 19 in the number. No preservative was found in any sample of milk or cream and no article of food was found to contain any prohibited colouring matter. The following table shows the articles of food in which preservatives were found, along with their nature and amount:—

ABSTRACT OF ARTICLES OF FOOD IN WHICH PRESERVATIVES, ETC.,
WERE FOUND, AND THE NATURE AND AMOUNT DURING YEAR
ENDING 31ST DECEMBER, 1937.

Nature of Article.	Number examined.	Number in which Preservatives, &c., were found.	Nature of Preservative, &c.	Parts per Million.	
				Highest.	Lowest.
Apples (Dried) ...	1	1	Sulphur Dioxide		358
Apple Tart ...	4	2	" "	168	112
Apricots (Dried) ...	12	10	" "	1,267	128
Beer ...	9	3	" "	19	9
Cider ...	2	1	" "		102
Cornflour ...	12	2	" "	96	12
Custard Powder ...	5	2	" "	32	19
Custard Pudding ...	1	1	" "		12
Fruit (Mixed) ...	2	1	" "		38
Fruit Juice (Sweetened) ...	4	4	" "	70	38
Fruit Syrup ...	2	1	" "		268
Fruit Salad (Dried) ...	10	10	" "	646	96
Grape Juice ...	4	2	" "	217	57
Ice Cream Powder ...	6	4	" "	38	19
Lemon Curd ...	4	1	" "		19
Mineral Water (Sweetened)...	12	5	" "	44	12
Mince ...	192	92	" "	1,195	Trace
Mutton Pies ...	8	1	" "		Trace
Orange Juice ...	1	1	" "		198
Peel (Mixed) ...	1	1	" "		19
Pears (Dried) ...	3	1	" "		51
Preserves ...	27	23	" "	88	6
Sauce ...	6	1	" "		61
Sausages ...	33	31	" "	1,263	83
Sausage Meat ...	13	12	" "	752	70
Sultanas ...	29	8	" "	672	76
Tapioca ...	32	2	" "	12	12
Wine (Alcoholic) ...	5	5	" "	108	12
" (Non-Alcoholic) ...	9	9	Benzoic Acid	402	Slight Trace
Totals ...	449	237			

Milk (Special Designations) Order (Scotland), 1936.—The following table shows the different grades of designated milk sold within the city, with the average daily quantities dealt in, also the number of dealers, bottling and pasteurising establishments licensed in terms of the Order at the end of the year. Two of the pasteurising establishments are equipped with additional plants which are used for pasteurising tuberculin-tested milk only. There are no licensed producers within the city other than the Corporation farm at Crookston and Hawkhead. The average daily sales of Tuberculin-Tested and of Pasteurised milk have increased from last year by 973 gallons in the former case and 4,974 gallons in the latter. Standard milk is at present not being dealt in. The figures of the past two years are included for comparison.

Certified—						1937	1936	1935
Producers	...	...	...	...	...	—	—	—
Dealers	...	...	...	...	...	241	106	107
Total Average Daily Sales (Gallons)						251	339	286

Tuberculin Tested—

Producers	...	...	...	...	...	1	—	—
Bottling Establishments	...	...	...	...	...	6	4	4
Dealers	...	...	...	...	...	399	289	318
Total Average Daily Sales (Gallons)						†2,073	1,100	1,061

Standard—

Producers	...	...	...	...	...	—	—	—
Bottling Establishments	...	...	...	...	...	—	—	1
Dealers	...	...	...	...	...	—	9	72
Total Average Daily Sales (Gallons)						—	43	*276

Pasteurised—

Pasteurising Establishments	...	...	...	...	...	6	6	6
Dealers	...	...	...	...	...	233	121	55
Total Average Daily Sales (Gallons)						10,574	†5,600	3,941

Includes *250 gallons Pasteurised.

„ †300 „ Tuberculin Tested (Pasteurised).

„ †1,174 „ Tuberculin Tested (Pasteurised).

Note.—The quantities shown in the table do not include supplies to institutions or milk of pasteurised standard not sold under that designation.

The number of samples of designated milk taken during the year was 340. These were submitted to the City Bacteriologist and the City Analyst for examination as to their conformity with the Order. The following table shows the results:—

RESULTS OF EXAMINATIONS OF DESIGNATED MILKS.

217

Bacteriological Examination										Chemical Examination									
TUBERCULIN TESTED (PASTEURISED)										TUBERCULIN TESTED (PASTEURISED)									
TUBERCULIN TESTED (PASTEURISED)										TUBERCULIN TESTED (PASTEURISED)									
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TUBERCULIN TESTED (PASTEURISED)										TUBERCULIN TESTED (PASTEURISED)									

* As no coliform requirement, only included for reference.

From this table it will be seen that 81 per cent. of the samples examined were in conformity with the standards required as compared with 83 per cent. last year. This year, 40 samples of Certified and Tuberculin-Tested milk, taken at regular periods from the different supplies delivered to city dairies, were tested for possible tubercle. All the tests proved negative. Regarding milk fat, the figure is again satisfactory, showing 94.7 per cent. in conformity. This is a slight increase from last year's figure of 94 per cent.

Supplies of Designated Milk to Corporation Hospitals, Etc.—The amount of milk supplied daily to the Corporation institutions averages approximately 1,944 gallons. Of this quantity, 1,509 gallons are from cows which have been tuberculin-tested, and 435 gallons are of pasteurised quality.

Of 171 samples of tuberculin-tested milk examined, 141 were found to conform with the requirements, showing a percentage of 82 as compared with 88 in the previous year. Thirty-six samples of pasteurised milk were examined, and 26 of these were found satisfactory in respect of bacterial count, while 10 were found to have counts above the prescribed limit. 207 samples of tuberculin-tested and of pasteurised milk were biologically examined for the presence of tubercle, and none was found positive.

In addition, 481 samples were submitted to chemical examination, and of these 459 were in conformity, showing 95 against 98 per cent. in 1936. The average fat content of the samples was 3.84 per cent.

Examination of Ordinary Market Milk for the Presence of Tubercle.—Sampling of milk on its arrival by train and motor transport at city dairies was continued during the year by the milk inspectors. All samples were examined biologically for the presence of tubercle. Of 318 samples examined, 26 were found to contain living tubercle bacilli. This shows a percentage of 8.18 as against a percentage of 8.88 in the previous year.

The following table shows the figures for the year along with those of the two years previous, and shows also the district in which the milk was produced:—

SAMPLES OF PRODUCERS' SUPPLIES EXAMINED FOR THE PRESENCE OF TUBERCLE.

County.	1937		1936		1935	
	No. Examined	No. Tuberculous.	No. Examined.	No. Tuberculous.	No. Examined.	No. Tuberculous.
Argyll...	—	—	2	—	2	—
Ayr ...	178	14	51	7	77	7
Bute ...	14	1	25	1	10	1
Clackmannan	—	—	2	2	—	—
Dunbarton ...	11	1	19	2	16	2
Glasgow ...	4	—	3	—	—	—
Lanark ...	77	9	162	14	131	13
Perth ...	—	—	—	—	1	—
Renfrew ...	31	1	24	1	51	7
Stirling ...	3	—	27	1	20	1
Totals ...	318	26	315	28	308	31

Bacterial Counts of Ordinary Market Milk Supplied to the City.—

The foregoing samples, examined for the presence of tubercle bacilli, were in addition examined for their purity, as shown by the number of bacteria and the presence of coliform bacillus. The following table gives particulars of results:—

BACTERIAL COUNTS OF ORDINARY MARKET MILK SUPPLIED TO THE CITY.

Number examined.	Average number of Bacteria per ml.					Coliforms in 1/100 ml. (2 days).	
	Under 100,000	100,000 to 200,000	200,000 to 500,000	500,000 to 1,000,000	Over 1,000,000	—	+
318	198	37	33	8	42	214	104

Judged from the bacterial content, 111 (56.06 per cent.) of the 198 samples with less than 100,000 bacteria per millilitre were of "Certified" quality, compared with 85 (47.75 per cent.) of 178 with less than 100,000 bacteria per millilitre in 1936. 235 (73.73 per cent.) of the total number of samples taken were equal to "Standard" quality, compared with 215 (68.25 per cent.) in 1936. Coliforms were absent in 214 samples (67.3 per cent.), compared with 177 (56.19 per cent.) in 1936. These samples were also submitted for chemical analysis. One was deficient in milk fat and 33 were found to be low in non-fatty solids. The average fat and non-fat content of the samples were 3.75 and 8.75 per cent. respectively.

Raw Milk as Retailed in the City.—Eighty-four samples of raw (untreated) milk were purchased from retail dairies and from vehicles retailing milk in the city. Each year the quantity of this class of milk grows less, and to date it comprises only 10 to 12

per cent. of the total supply of the city. It is usually supplied direct from the farm by a producer. Certain producers deliver milk to several retailers and, in addition, carry on a retail business. Reports received from the City Bacteriologist showed that 4 of the 84 samples delivered to him (4.76 per cent.) were tuberculous. When a sample was reported as positive the sale of milk from the infected supply was stopped immediately, and the Medical Officer of Health of the Local Authority concerned was notified. No retailer was permitted to resume supplies from a suspected source until all danger of infection had been removed. Usually one or more infected animals were found when inspection was made of the herd by a veterinary surgeon. The samples submitted were examined also for bacterial content, and the average number of bacteria found is shown in the following table:—

BACTERIAL COUNTS OF RAW (UNTREATED) MILK AS RETAILED
IN THE CITY.

Number mined.	Average Number of Bacteria per ml.						Coliforms in 1/100 ml. (2 days).	
	Under 30,000	30,000 to 100,000	100,000 to 200,000	200,000 to 500,000	500,000 to 1,000,000	Over 1,000,000	—	+
84	37	32	7	—	3	5	71	13

Child Welfare Milk.—This milk is distributed throughout the city by a large firm of dairymen via their various depots. It is supplied to those mothers and children approved at the city clinics as needful. The details of quantities, etc., will be found in the section of this report which deals with the supply of milk to necessitous mothers and children. Up to and including the month of May the milk supplied was of Pasteurised quality; thereafter a higher quality, viz.:—Tuberculin-Tested (Pasteurised), was introduced. Fifty-three samples taken at intervals throughout the year proved to be free of tubercle. Twenty-two of the 53 samples were from the ordinary pasteurised supply, and these showed an average bacterial count of 11,250 per millilitre and an average fat and non-fat content of 3.63 and 8.77 per cent. respectively. The remaining 31 samples were from the Tuberculin-Tested (Pasteurised) milk, and showed an average bacterial content of 19,763 per millilitre and an average fat and non-fat content of 3.76 and 8.73 per cent. One sample of the Pasteurised and three of the Tuberculin-Tested (Pasteurised) were not in conformity with the standard set for these grades. Two samples of the dried milk supplied, taken for analysis, were found to be in conformity with the Dried Milk Regulations.

Supply of Milk to Schools.—The practice of supplying milk to children in schools—continued now for the fourth year—has become part of the school curriculum, and remains popular among the pupils. This milk is largely Tuberculin-Tested, and is pasteurised in dairy establishments which are licensed in terms of the Milk (Special Designations) Order (Scotland), 1936. During the year no complaint was received from any school regarding the quality of the supply. Samples of the milk have been taken from the schools throughout the year. These have been examined with regard to compliance with the Milk (Special Designations) Order and have also been submitted to biological and chemical examination. The following tables show the results of the examinations and the average daily quantities supplied, computed on a monthly basis. The number of school days in each month is also shown.

SCHOOL MILK, 1937.

No. examined.	No. exceeding Count.	Bacteria per millilitre.			No. Tuberculous.	Fat and Non-Fat Solids.		
		Highest.	Lowest	Average.		Highest Sample.	Lowest Sample.	Average of all Samples
121	15	200,000+	200	16,175	None	Fat Solids 4.40	2.40	3.65
						Non-Fat Solids 8.83	9.03	8.79

AVERAGE DAILY QUANTITIES SUPPLIED.

Month.	Gallons.	School Days.	Month.	Gallons.	School Days.
January ...	3,877.24	19	July ...	—	—
February ...	4,226.88	20	August ...	1,346.60	3
March ...	3,986.12	18	September ...	4,318.11	19
April ...	4,318.97	22	October ...	4,433.76	24
May ...	4,173.57	17	November ...	4,412.40	18
June ...	4,086.78	23	December ...	4,290.62	20

Daily average throughout the year=3,951.91 gallons.

The Public Health (Condensed Milk) and the Public Health (Dried Milk) Regulations (Scotland), 1931.—Tins of condensed milk and dried milk prepared in England, Ireland, Canada, Denmark, and Holland, were obtained for examination with respect to their conformity with the above regulations which set up standards for milk solids and for equivalents to a stated quantity of liquid, whole or skimmed milk. Provision is also made in the regulations regarding the wording, form and notice on labels. Altogether, 36 tins.

comprising nine full cream unsweetened, seven full cream sweetened, and twenty machine-skinned sweetened were procured from dealers in different parts of the city. In addition, six tins of dried milk and milk food were purchased. All these samples were found to conform with the requirements. One tin, containing less than 70 per cent. of dried milk and therefore not coming under the regulations, was found to be a satisfactory food. This type also contains cereals, etc., and is sold as food for infants and invalids. Although there is a considerable sale of condensed full cream and skimmed milk in the city, the quantity of dried milk dealt in is practically negligible.

Misleading and Deceptive Labelling of Food.—Instances of the deception practised by certain merchants in describing the quality of food offered for sale have been the subject of much comment and criticism. A very interesting and comprehensive article under the above title has been prepared by a Medical Officer of one of the London boroughs. Cases similar to those referred to in that article occur frequently throughout the country and are due very often to doubtful goods which can be traced to common sources. A commodity offered for sale in the city in packets labelled "Dairy Milk Pudding Powder made from Scottish Dairy Full Cream Milk, Farm Eggs, Best Empire Cereals and Pure Cane Sugar," came under the notice of the Department. Analysis made of a sample of this Dairy Milk Pudding Powder revealed that it had been prepared from milk powder deficient in fat to the extent of 65 per cent., and that the amount of egg contained in the preparation was negligible.

After consultation with the Fiscal and due consideration of all the facts, it was decided to test a case in court. At the first hearing, objection was taken by defendant's agent to the relevancy of the complaint on the grounds (1) that no standard for Dairy Milk Pudding Powder was specified, (2) that in the absence of such a standard the deficiency in milk fat could not be stated.

It was represented by the Fiscal that, since the pudding powder was claimed to be made from dairy full cream milk, that proportion of the pudding powder which consisted of dried milk should contain the same amount of fat as would be found in any milk powder made from full cream milk. He pointed out that by the intimation on the label—"Made from Scottish Dairy Full Cream Milk"—the defendants themselves had set up a standard to which he was prepared to hold them. He said that anyone taking up the packet and reading the statements thereon would think that the

pudding powder was made from full cream milk in addition to all the other ingredients stated, viz.:—farm eggs, cereals, etc., whereas it most certainly was not. The defendants alleged that if they took a small quantity of full cream milk powder such as could be lifted between finger and thumb and drowned that with skimmed milk powder they would still be entitled to say that the pudding powder was made from full cream milk.

In reply it was claimed by the defence that there was some full cream milk powder in the product, but they did not say how much, and they knew of no reason why they should be made to state all the ingredients on the back of the package. In finding the complaint relevant and allowing proof the Stipendiary said that he would not at that stage say that there was no offence. He had come to the conclusion that he must sustain the charge, but in doing so he said that it would be one of the most difficult cases to prove that he had ever experienced either as a fiscal or as a magistrate.

In view of this statement from the bench and after further legal opinion had been obtained, the charge was deserted. This then is an example of what does go on in the way of misleading labelling of food and of the type of defence offered when any such practice is brought to light.

Merchandise Marks Act, 1926.—The various Orders made under this Act with regard to foodstuffs are enforced by the Food and Drugs Authority. Attention is given to the marking and labelling of the different imported foods throughout the city, and the provisions of the Act are generally found to be well observed. The marking of butter and of ham with their indications of origin are perhaps the most difficult regulations to enforce owing to there being no certain means of identifying these commodities with any particular country if the trader has resorted to any method of destroying their identity.

Sixteen cases, comprising fresh apples, butter, imported eggs in shell and imported raw tomatoes, were dealt with and convictions were obtained in each. The amount of the penalties imposed was £15 10s.

Agricultural Produce (Grading and Marking) (Eggs) (Scotland) Regulations, 1929.—One application was received in the course of the year for registration of premises to be used by way of trade

for the cold storage or chemical storage of eggs. The name of the person has been entered on the register, and a copy of the entry forwarded to the Department of Agriculture. A certificate of registration has also been issued to the applicant. The number of cold stores on the register kept as required by the Regulations is now five, which is an increase of one to the total of last year. British eggs kept in cold storage or chemical storage are required to be marked "cold stored," "chilled," or "sterilized," according to the manner of storage, before being removed for sale. This obtains so long as imported eggs have to bear an indication of the country of origin as required by the Merchandise Marks (Imported Goods) No. 5 Order. Eggs which are preserved by water glass or by any method other than cold storage or chemical storage must be marked "preserved," on sale or exposure for sale. Under the Regulations the prescribed designations for eggs produced in Scotland are "specials," "standards," and "mediums." These designations, which cannot be used without authority, apply to eggs weighing 17lbs., 15½lbs., and 14 lbs., per 120 respectively, with no 12 eggs weighing less than 26½ozs., 24ozs., or 21½ozs., in each grade. There are also certain other requirements as to the state and condition of the eggs.

On inspection of the stores throughout the year, no contravention of the Regulations was discovered, and the condition of the stores was found to be satisfactory.

Inspection of Food and Food Premises.—For the detection of unsound food and to ensure compliance with the various Acts and Regulations, 11,636 inspections were made of markets, stores, shops and places where food is stored for human consumption. The quantity of food condemned with the consent of the owners amounted to 14 tons 9 cwt. In addition, 25 gallons of ice-cream and ice-cream mixture were condemned. The food destroyed comprised 70 lots made up principally of vegetables, fresh fruit and canned goods, with lesser quantities of mushrooms, tongue, pork, brawn, etc. Tins of canned food were found to be blown and out of condition, quantities of vegetables were spoiled by frost or had been kept too long in transit, and the ice-cream had been contaminated. All these articles were disposed of in such a manner as would prevent their being used for human consumption.

Repairs and improvements were carried out in various premises, and intimations for the cleansing and linewashing of walls, etc., were satisfactorily complied with.

Premises registered in compliance with the Public Health (Meat) Regulations (Scotland), 1932, and granted certificates of approval of storage accommodation numbered nine. This is the same as last year. Thirty-six copies of certificates were issued in respect of vehicles carrying on from these premises, all of which have been kept in a satisfactory manner.

Fertilisers and Feeding Stuffs Act, 1926.—Twenty informal samples of feeding stuffs were procured during the year for examination by the Agricultural Analyst. These comprised a variety of the type used for cattle feeding and, with the exception of five, the analysis did not differ materially from the statutory statements supplied with the feeding stuffs when allowance was made for the limits of variation as laid down in the Act. Firms which supplied those feeding stuffs found to be below standard have been communicated with, and reasonable explanations for the excessive variations have been received. In addition, six formal samples of fertilisers were obtained from premises in the city in the official manner. One of these, which consisted of bone meal, was found not to be in conformity. The seller on being informed referred the complaint to his supplier. An explanation which was considered satisfactory was tendered, and the matter was adjusted between the seller and the supplier. An assurance was given that more care would be exercised in the future. Results of the examinations have been duly reported to the Department of Agriculture for Scotland.

Dairies.—In terms of the Milk and Dairies (Scotland) Act, 1914, the Local Authority must keep a register of all dairies and dairymen within the district granted certificates of registration in accordance with the Act. The number of these on the register at the end of the year was 1,770, which is equal to one dairy for every 632 of the population. This number comprises 31 producers, 26 wholesalers, 64 wholesale and retail dealers, 912 retailers of loose milk, 683 retailers of bottled milk only, and 54 carts from without the district. The carts, for the purposes of the Act, are deemed premises within the city. The decrease in the total number of registered premises from the previous year is 29. A limited certificate of registration is given to retailers who deal in bottled milk only, commonly when their premises do not fully comply with the provisions of the Dairy Bye-laws. The percentage of these dealers is 38.6 of the total number registered, compared with 38.3 in 1936

21,763 inspections were made, and 39 contraventions were discovered and suitably dealt with. Repairs and alterations were carried out as required in 27 instances.

A dairyman was proceeded against for bottling milk in the street at his cart by the hands of an employee. He pled not guilty through an agent, and maintained that he had not "caused or permitted any other person to do that act or thing." This wording of the Bye-laws is somewhat unsatisfactory, and allows defaulters to shelter behind its terms. If the dairyman himself does not perform the act the proof that he caused or permitted some other person to do it has been found difficult. In this case, after a long proof, a conviction was obtained and a fine of £2 imposed. For using a road vehicle which was in a dirty condition for the conveyance and distribution of milk, another dairyman was fined £1.

Milk and Dairies (Scotland) Order, 1934.—This Order prohibits the addition of colouring or thickening matter to cream, the transferring of milk from one vessel to another other than in registered premises (with certain exceptions), the storing of milk in unsuitable places, the consigning of milk in unsealed cans, the consigning of cans without having the name and address of the consigner attached, the selling of cream and skimmed milk from unmarked vessels, etc.

There was little cause for complaint other than the consigning of milk in vessels which were not properly sealed. Several cases of this description were reported to the authorities concerned and had their attention.

Food and Drugs (Adulteration) Act, Section 8—Registration of Butter Factories and Wholesale Dealers in Margarine, Etc.—There was one margarine factory on the register kept by the Local Authority at the end of the year. This shows no change from last year. One application for registration of premises as required by the Act was received during the year from a wholesale dealer in margarine. The premises were found to be suitable, and the application was granted. Six names were deleted from the register owing to removals and to persons having ceased to deal in margarine by wholesale. There were no new butter factories added to the register, but two were removed owing to the firms having given up business.

All these premises were inspected throughout the year and found to be conducted in a satisfactory manner. No contraventions were

discovered. Samples of butter and margarine obtained and submitted for analysis to the City Analyst have been reported upon by him as genuine.

The number of premises on the register at the end of the year was as follows:—

Factories of margarine	...	...	...	...	...	1
Wholesale dealers in margarine	...	...	...	...	...	140
Factories of or wholesale dealers in milk-blended butter	...	...	...	...	...	—
Butter factories	...	...	...	...	...	20

Byres.—Land taken over for the housing requirements of the citizens is again the cause of a decrease in the number of dairy byres in the city. The number of producers on the register at the end of the year was 31, and these have 35 byres. This shows a decrease of three producers during the year. The total number of inspections made of the byres was 401, and the premises were generally found to be well kept. Repairs and alterations were required in nine instances, and all work has been carried out as requested. All the farms, with one exception, are provided with grazing facilities. In this particular case the byre is situated in a busy part of the city, and the animals are stall-fed. This is not a suitable way to keep cows, and will not be permitted to continue indefinitely. In the byres accommodation for 911 cows is provided, and the average number kept is 769.

Ice-Cream Shops.—The number of shops registered to deal in ice-cream at the close of the year was 534. This number does not include shops which sell ice-cream in properly closed cartons which are stored in refrigerators on the premises. Ice-cream, however, is not permitted to be dealt in without the premises having first been inspected and approved. All premises were inspected at intervals during the year, and the number of visits paid was 7,210. Contraventions of the Bye-laws, numbering 16, were discovered and dealt with, while repairs and alterations were carried out in nine instances.

Examinations made for the presence of bacteria in 16 samples taken from shops and street vendors showed results as follows:—

NUMBER OF COLONIES PER ONE MILLILITRE.

0— 30,000	30,001— 200,000	200,001— 500,000	500,001— 1,000,000 +
3	4	4	5

Two samples had coliform organisms in 1/100ml., one in 1/10ml., three in 1ml., and ten samples were minus coliforms. Dealers

having bacterial counts of over 200,000 per ml. in their product were notified and requested to exercise greater care in its preparation and handling.

Twenty samples submitted for chemical examination were found in different instances to have been prepared from skimmed milk, from full cream milk, or from cream. These had a milk-fat content varying from .73 per cent. to 13.34 per cent. The average milk-fat in the British article was 8.68 per cent., while that of alien manufacture was 2.47 per cent.

One ice-cream vendor, whose premises and methods were unsatisfactory, was reported to the Health Committee of the Corporation with a view to having his name removed from the register. He appeared before the Committee with his legal adviser, and after the case had been heard and the facts had been duly considered it was decided that his name should be removed from the register and that he should be notified to that effect. This has been carried out.

All ice-cream premises, with one or two exceptions which are at present under review, are generally well kept.

A. M. STEWART,
Senior Food Inspector

28th March, 1938.

THE FOOD AND DRUGS (ADULTERATION) ACT, 1928.

TABLE SHOWING NATURE AND NUMBER OF TOTAL SAMPLES
PROCURED AND EXAMINED DURING 1937.

Nature of Sample.	Informal.		Statutory.		Nature of Sample.	Informal.		Statutory.	
	Number taken.	Number non-genuine.	Number taken.	Number non-genuine.		Number taken.	Number non-genuine.	Number taken.	Number non-genuine.
Almonds, Ground	14	—	—	—	Chocolate Wafers	1	—	—	—
Almond Cake ...	4	—	—	—	Cider ...	2	—	—	—
Angelica ...	1	—	—	—	Cinnamon, Ground	31	—	8	—
Apples, Dried ...	1	—	—	—	Citron Peel ...	2	—	—	—
Apple Cake ...	3	—	—	—	Cochineal ...	1	—	—	—
Apple Tart ...	4	1	—	—	Cocoa ...	24	—	5	—
Apricots, Dried ...	6	—	6	—	Cocoonut,				
Arrowroot ...	7	—	4	—	Desiccated ...	4	—	—	—
Bacon ...	1	—	3	—	Coffee ...	26	—	13	—
Baking Compound	—	—	1	—	Coffee Essence with				
Baking Powder ...	4	—	—	—	Chicory ...	12	—	—	—
Baking Soda ...	—	—	1	—	Cooking Fat ...	2	—	1	—
Barley ...	14	—	5	—	Cornflour ...	7	—	5	—
Barley Lemonade	1	—	—	—	Crab, Dressed ...	1	—	—	—
Barley Meal ...	2	—	—	—	Cream ...	27	—	9	—
Beans with					Cream of Magnesia	2	1	1	1
Tomato Sauce	11	—	—	—	Cream of Tartar	16	—	10	—
Beef Extract ...	1	—	—	—	Currants ...	31	—	3	—
Beer ...	9	—	—	—	Curry Powder ...	1	—	2	—
Biscuits ...	4	—	—	—	Custard Powder	3	—	2	—
Black Draught ...	2	—	—	—	Custard Pudding	1	—	—	—
Black Pudding ...	2	—	—	—	Dates ...	1	—	1	—
Boracic Acid					Date Pudding ...	2	—	—	—
Powder ...	12	—	5	—	Dripping ...	52	1	23	2
Borax ...	6	—	8	—	Egg Macaroni ...	1	—	—	—
Boston Cream ...	2	—	—	—	Egg Vermicelli ...	1	—	—	—
Boston Cream					Essence of Rennet	5	3	1	1
Powder ...	2	—	—	—	Figs, Dried ...	9	—	5	—
Brandy Essence	1	—	—	—	Fig Pudding ...	1	—	—	—
Brose Meal ...	1	—	—	—	Fish Cakes ...	3	—	—	—
Butter ...	94	2	26	—	Fish Dressing ...	1	—	—	—
Cake Flour ...	1	—	—	—	Fish Paste ...	8	—	—	—
Carraway Seeds	—	—	1	—	Flour, Self Raising				
Cascara Sagrada	3	—	—	—	and Ordinary	24	—	11	—
Celery Powder ...	1	—	—	—	Flowers of Sulphur	13	—	6	—
Cheese ...	18	—	6	—	Fruit, Mixed ...	2	—	—	—
Chemical Food ...	10	1	1	—	Fruit Cake ...	4	—	—	—
Cherries, Canned					Fruit Jelly ...	1	—	—	—
and Glace ...	8	—	1	—	Fruit Juice,				
Chicken and Ham					Sweetened ...	4	—	—	—
Roll ...	1	—	—	—					

Nature of Sample.	Informal.		Statutory.		Nature of Sample.	Informal.		Statutory.	
	Number taken.	Number non-genuine.	Number taken.	Number non-genuine.		Number taken	Number non-genuine.	Number taken.	Number non-genuine.
Fruit Salad, Dried	3	—	7	—	Milk, Malted ...	1	—	—	—
Fruit Syrup ...	2	—	—	—	Milk, Skimmed ...	10	—	12	—
Fruitarian Luncheon ...	1	—	—	—	Milk, Sweet	2,063	48	784	18
Gin ...	5	—	1	—	Milk, Condensed Full Cream (Sweetened) ...	7	—	—	—
Ginger, Ground and Preserved	33	—	3	—	Milk, Condensed Full Cream (Unsweetened)	9	—	—	—
Glycerine ...	11	—	—	—	Milk, Condensed Machine Skimmed (Sweetened) ...	20	—	—	—
Glycerine of Borax	4	—	—	—	Milk, Dried ...	5	—	—	—
Grape Fruit, Canned ...	1	—	—	—	Milk, Dried and Virol ...	1	—	—	—
Grape Juice ...	4	—	—	—	Mince ...	53	21	139	37
Gravy Powder and Salt ...	3	—	1	—	Mincemeat ...	7	—	—	—
Gregory's Powder	12	—	3	—	Mince Pies ...	2	—	—	—
Haggis, Canned	3	—	—	—	Mixed Peel ...	1	—	—	—
Herrings ...	3	—	—	—	Mineral Water (Sweetened) ...	12	—	—	—
Honey ...	4	—	—	—	Mustard ...	2	—	5	—
Horseradish Cream	1	—	—	—	Mutton Pies ...	8	—	—	—
Ice Cream ...	21	—	—	—	Oat Flour ...	4	—	—	—
Ice Cream Powder	6	—	—	—	Oatmeal ...	11	—	2	—
Iodine Paint ...	1	—	—	—	Oil, Almond ...	24	—	3	—
Ipecacuanha Wine	5	—	—	—	Oil, Camphorated	32	3	7	—
Lard ...	17	—	11	—	Oil, Castor ...	4	—	—	—
Lemon Cream ...	1	—	—	—	Oil, Cod Liver ...	7	—	2	—
Lemon Curd ...	4	—	—	—	Oil, Eucalyptus	13	—	—	—
Lemon Essence ...	1	—	—	—	Oil, Olive ...	27	1	2	—
Lemon Peel ...	3	—	2	—	Ointments, Medicinal ...	21	2	1	1
Lemon Powder ...	1	—	1	—	Oranges, Canned	1	—	—	—
Lentils ...	8	—	—	—	Orange Juice ...	1	—	—	—
Liniment of Turpentine ...	3	—	—	—	Orange Peel ...	7	—	2	—
Linseed Meal ...	10	1	1	1	Ox-Tongue Loaf	1	—	—	—
Liquorice Powder, Compound ...	11	—	6	—	Paraffin, Medicinal ...	2	—	—	—
Loganberries, Canned ...	1	—	—	—	Peas, Canned ...	13	—	—	—
Macaroni ...	12	—	—	—	Pears, Canned and Dried ...	2	—	1	—
Macaroni and Dried Milk ...	1	—	—	—	Pease Meal ...	6	—	1	—
Margarine ...	36	1	22	1	Pepper, Black ...	1	—	2	—
Meat Extract ...	1	—	—	—	Pepper, White ...	31	—	19	—
Meat Paste ...	14	—	—	—	Pickles ...	2	—	—	—
Meat, Potted ...	17	—	—	—	Plums, Canned ...	2	—	—	—
Milk Foam Crystals	1	—	—	—					
Milk Pudding Mixture ...	1	—	—	—					

THE FOOD AND DRUGS (ADULTERATION) ACT, 1928.
*Details of Samples, Etc., in which proceedings were instituted
during 1937.*

Number of complaints.	Nature of sample and alleged offence.	Number of convictions.	Amount of fines imposed.	Number dismissed or found "not proven."	Number deserted simpliciter.	Warranty Defence sustained.	Amount of expenses paid.
1	<i>Boracic Ointment</i> —Deficient in boric acid	1	£1 5 0	—	—	—	—
1	<i>Crushed Linseed</i> —Deficient in fixed oil	—	—	—	—	1	—
2	<i>Dripping</i> —Contained artificially hardened fat	—	—	—	2	—	—
8	<i>Milk (Sweet)</i> —Deficient in milk fat	6	27 0 0	1	1	—	—
3	<i>Milk (Sweet)</i> —Deficient in milk solids other than fat	3	11 0 0	—	—	—	—
1	<i>Milk (Sweet)</i> —Deficient in milk fat and in milk solids other than fat	1	3 0 0	—	—	—	—
1	<i>Milk</i> —Selling from a vehicle without having the name and address of the seller conspicuously inscribed thereon	1	0 10 0	—	—	—	—
27	<i>Mince</i> —Contained preservative during proscribed period	27	53 18 6	—	—	—	—
4	<i>Mince</i> —Contained an excess of preservative during permitted period	4	9 0 0	—	—	—	—
1	<i>Premier Jus</i> —Contained artificially hardened fat	1	2 0 0	—	—	—	—
3	<i>Sausages</i> —Contained an excess of preservative	3	10 0 0	—	—	—	—
1	<i>Sausage Meat</i> —Contained an excess of preservative	1	2 0 0	—	—	—	—
1	<i>Whisky</i> —Contained an excess of water	1	1 0 0	—	—	—	—
54		49	£120 13 6	1	3	1	—

ABSTRACT OF PROCEEDINGS UNDER OTHER THAN THE FOOD
AND DRUGS (ADULTERATION) ACT DURING 1937.

Act, Order, &c.	Nature of alleged offence.	Number of complaints.	Number of convictions.	Amount of fines imposed.	Number dismissed, found "not proven," or deserted simpliciter.
Dairy Bye-laws	Bottling milk elsewhere than in dairy premises	1	1	£ 2 0 0	—
Do.	Using a road vehicle which was in a dirty condition for the conveyance and distribution of milk	1	1	1 0 0	—
Milk and Dairies (Scotland) Act, 1914	Failing to register as a dairy-man	1	1	1 0 0	—
Merchandise Marks Acts and Orders	Imported butter—failing to label with an indication of origin	6	6	4 10 0	—
Do.	Imported fresh apples—failing to label with an indication of origin	2	2	1 10 0	—
Do.	Imported raw tomatoes—failing to label with an indication of origin	7	7	6 10 0	—
Do.	Imported eggs in shell—selling imported hen eggs in shell without their bearing an indication of origin	1	1	3 0 0	—
		19	19	£19 10 0	—

SECTION XI.

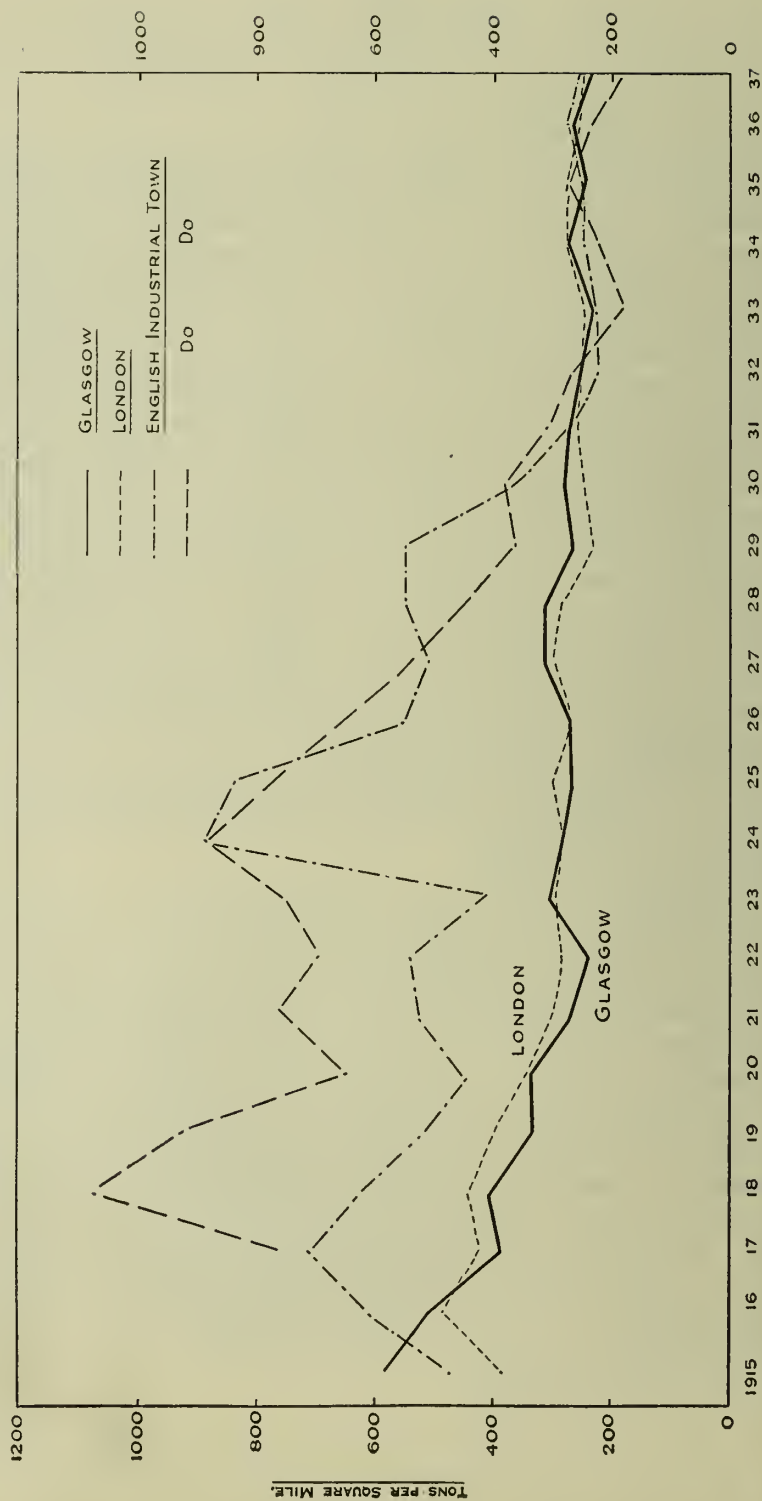
AIR PURIFICATION—SMOKE ABATEMENT.

The promotion of the health and amenity of our cities and towns demands that everything possible should be done to secure a cleaner atmosphere, freer from the industrial and domestic smoke which deprives communities of their proper proportion of available sunlight. Although the precise effect of smoke pollution on health is difficult to demonstrate scientifically, I think it can be affirmed that the attainment of a full measure of health is prevented and that life under a canopy of smoke and its associated chemicals is one of subnormal health. An unnecessary burden is certainly added to domestic cleanliness. Again, it is well known that smoke fogs cause direct injury to health. Winter fogs in a northern industrial city, especially when they are associated with low temperatures, increase the incidence and mortality of the respiratory diseases, sometimes to a high degree and with consequences which may be prolonged well beyond the actual period of the fog itself. The abatement of smoke, therefore, demands careful attention in the interests of health; notwithstanding that some progress has been made, it continues to be one of the major environment services in the towns of this country. Purification of the air is not an exact science, and there are many practical difficulties of a technical and financial as well as of an administrative kind to be overcome before unclean air as a contributory cause of sickness and ill-health is finally eliminated.

The question of soot gauge records, their type and distribution, has been under consideration for some time, and after consultation with Dr. Owens of the Department of Scientific Advisory Research it was decided to reduce and re-arrange the recording stations and place them in carefully chosen positions, so as to reflect as accurately as possible the amount of deposit from the air falling on the city.

The following report was prepared for the information of the Committee on Health, and the suggested alterations received their approval. Until the new scheme was adopted, nine gauges were in use, and from the beginning of 1937 the number was reduced to five. The graph showing atmospheric pollution in Glasgow, based on the average deposit of all the city gauges which have been in operation since the early years of the century is given on the following page.

AIR PURIFICATION:—Annual deposit in tons per square mile Glasgow, London and two English Industrial Towns since 1915.



NOTES ON SOOT GAUGE RECORDS.

During a visit to the city some years ago Dr. Owens of the Department of Scientific and Industrial Research, to whom all the records from various towns are sent for collation, suggested that the old apparatus should be replaced by a more modern outfit then available, but, owing to the cost of these and the fact that the question of reducing the number of stations was under consideration, only five were obtained. With these available the opportunity was taken of carrying out some interesting experiments. These gauges were placed as follows:—

No. 1 was placed alongside the old gauge at Glasgow Cross in order to compare the deposit in the old and new gauges.

No. 2 was placed at Ruchill Hospital as a check on the old gauges situated in Ruchill Park and Botanic Gardens respectively. The Botanic Gardens gauge had been found rather unsatisfactory.

No. 3 was placed in the grounds at Belvidere Hospital in order to find an alternative site for the old gauges at Richmond Park and Tollcross Park.

No. 4 was placed at Mearnskirk Hospital with a view to discovering the amount of atmospheric deposit at a country site about seven miles to the south of the centre of the city and about half that distance from the boundary of the city, a position clear of most of the smoke for the wind apparently seldom blows from the north.

No. 5 was placed at Robroyston Hospital, about $3\frac{1}{2}$ miles to the north of the city, a position over which the prevailing south-west winds would carry the smoke of the city.

The results of this enquiry are given in the attached graphs for the years 1935-36. At Glasgow Cross, which may be taken as the centre of the city, the variations in the monthly deposit are fairly similar in the old and new gauges, such differences as are shown being probably caused by the proximity of the new gauge to some source of pollution for they are both situated on the top of the Chemical Laboratory building.

The graph of Mearnskirk gauge shows the difference in pollution in the surrounding country side with an average during the past eighteen months of 7.44 tons per square mile and the deposit in the city which was 32.42 tons.

In the north of the city the records of the three gauges at the Botanic Gardens, Ruchill Park, and the new gauge at Ruchill Hospital, which is contiguous to the park, are fairly uniform over the eighteen months, the respective average deposits being 18.34, 17.48 and 19.33 tons.

In the east of the city there are three gauges, old apparatus at Richmond Park and Tollcross Park and new apparatus at Belvidere Hospital, which lies more or less between the two former sites. The three graphs give a comparison of the records of these stations and again they are fairly uniform. The average deposit over eighteen months was 21.95 tons per square mile at Richmond Park, 22.64 tons at Tollcross and 22.95 tons at Belvidere Hospital.

The old gauges which, as already stated, have been condemned are more numerous than is now necessary for this part of atmospheric research work. Difficulty is experienced with the breakage of the carboys during frosty weather so that the records are lost; during the winter of 1935-36 there were quite severe periods of frost and breakages in the new apparatus were negligible. The amount of work to be undertaken by the Chemical Department and the time taken to evaporate the water collected in 14 gauges (9 old and 5 new) has become somewhat excessive. It is therefore recommended that as from the beginning of 1937 the five new sets of apparatus should be placed as follows:—

Centre of the City	(Glasgow Cross).
North of the City	(Ruchill Hospital about 2 miles from the Cross).
South of the City	(Queen's Park about $2\frac{1}{2}$ miles from the Cross).
East of the City	(Tollcross Park about $3\frac{1}{4}$ miles from the Cross).
West of the City	(Victoria Park about $3\frac{1}{2}$ miles from the Cross).

The old recording gauges will also be retained at their present sites until March, which is the end of the year for the purposes of the Department of Scientific and Industrial Research.

GLASGOW :—Monthly deposit in tons per square mile in Soot Gauges 1935-36.

CHART I.

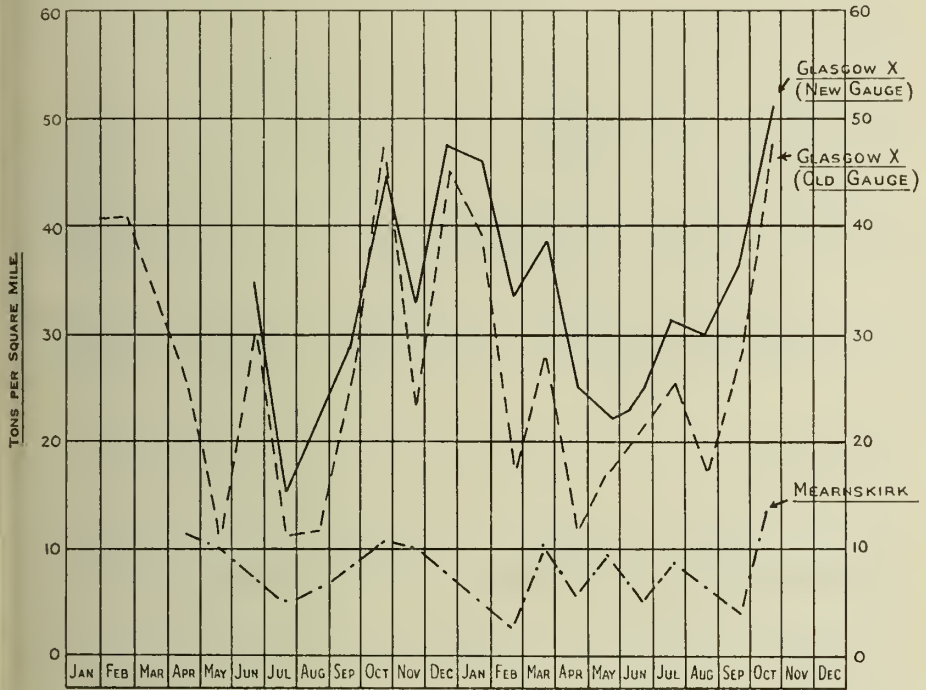
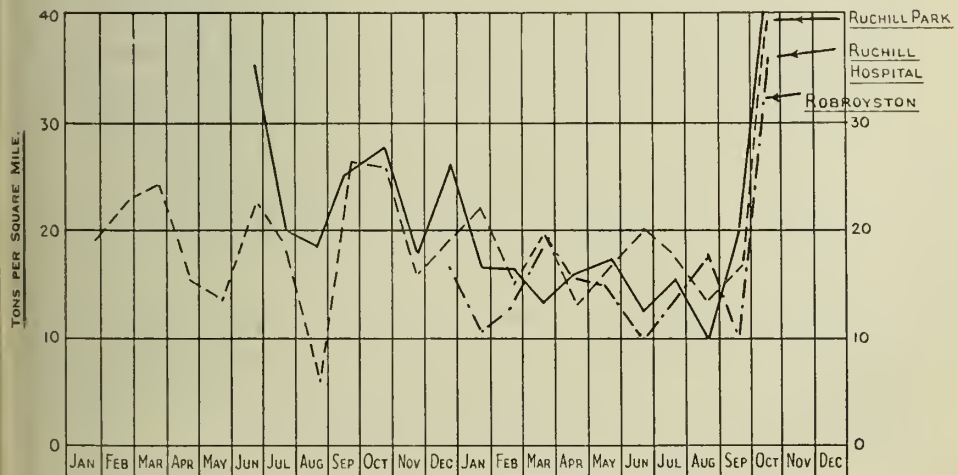


CHART II.



GLASGOW :—Monthly deposit in tons per square mile in Soot Gauges 1935-36.

CHART III.

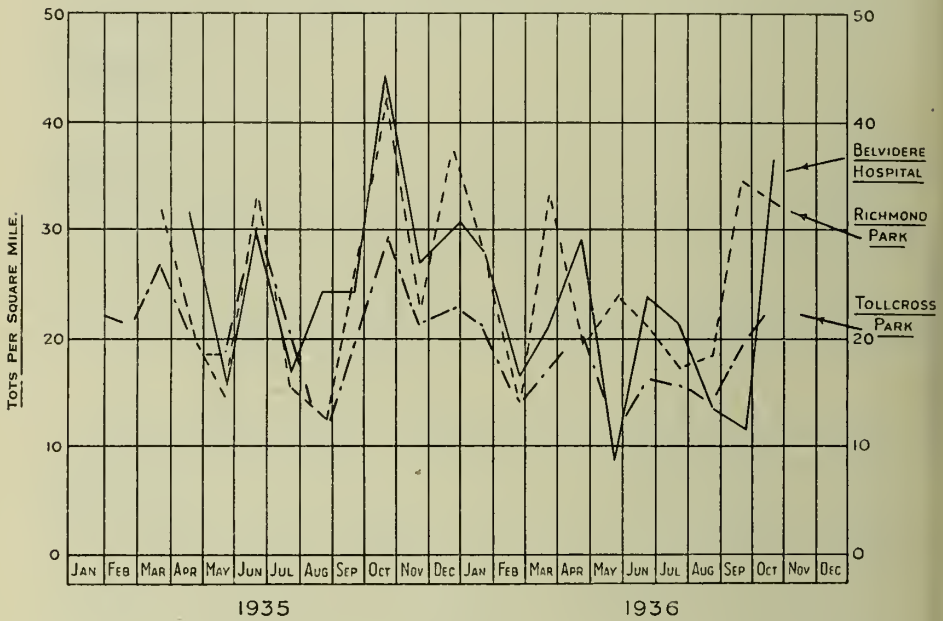
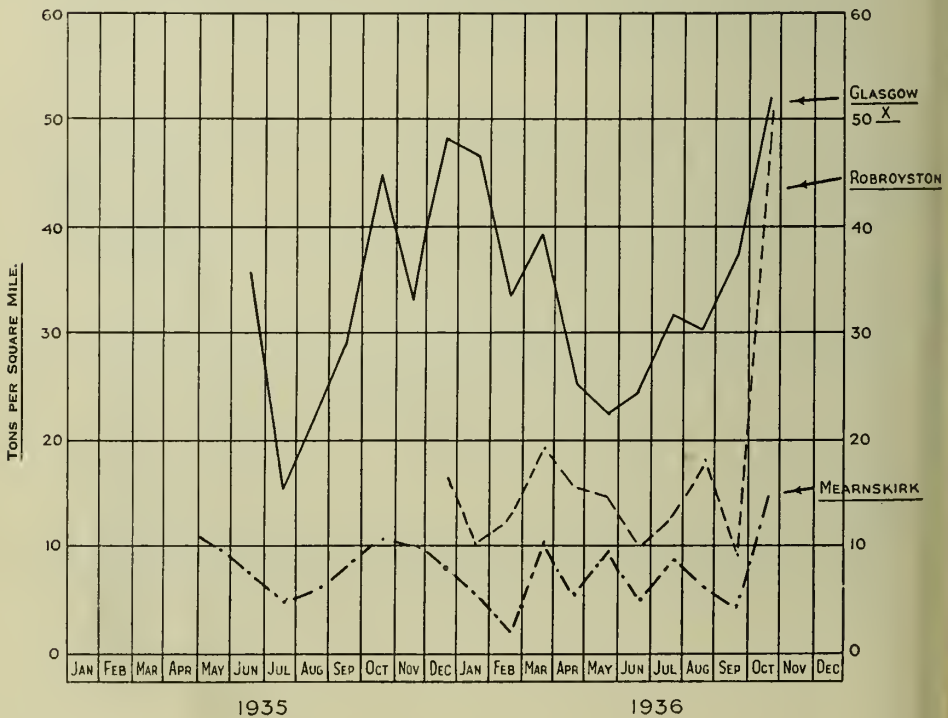


CHART IV.



The following notes on work done during the year have been prepared by the Senior Smoke Inspector:—

Practical smoke abatement is by no means an exact science. Many and varied adverse factors prevent simple solutions of the problems which occur from day to day. These factors are both technical and psychological. In deciding and advising upon remedial measures of a technical kind to be adopted, the official draws upon his knowledge of basic combustion principles and uses his skill in the practical application of these principles to the particular conditions met with. Technical problems may be such that the measures required may take months to apply with success. Most smoke problems can be solved with the aid of engineering skill, excepting perhaps certain individual processes. The psychological aspect, however, is quite another matter and often presents many difficulties.

Failure to appreciate the evils resulting from a smoke-polluted atmosphere, acceptance of conditions as they are, and lack of effort to improve matters are still encountered. Indeed, absence of co-operation on the part of plant owners and executives, if not active opposition, may often be a cause of obstruction. These difficulties may be due to misplaced economy in the use of the wrong fuel and lack of a knowledge of the elementary principles of combustion. The Department, although it possesses strong statutory powers to enforce the reduction of excess smoke emission, only does so as a last resort.

Summary of Work Done.—The following is a summary of the observation and inspection work, etc., carried out by the staff during the year of all chimneys (other than domestic) and the accompanying plants:—

Number of observations of chimneys...	...	...	25,997
Number of inspections of steam boilers and other furnaces	...	...	1,040
Number of intimations of excess smoke given	...	...	385
Number of initial Warning Notices served	...	...	28

Improvements to Plant Noted during 1937.—Each year a list is included in this report of improvements which have come within the knowledge of the inspectors during their routine and special duties. The improvements noted here have all made a direct contribution to the reduction of the aggregate smoke emission from

the chimneys and plants with which they are connected. Due to the active business conditions now prevailing many and varied improvements of a substantial nature have been carried through and some long deferred reconstruction schemes have now been given effect to, this state of affairs being particularly noticeable in those trades directly associated with or ancillary to the metallurgical industry. Even small-scale establishments have in many instances had to put down new plant or substantially increase the capacity of existing plant, the added improvements being, of course, in keeping with modern practice and therefore raising the general thermal efficiency of the plant as a whole. A notable feature during the year was the large number of small automatic stokers and oil-burning installations fitted in central heating plants in both business and institutional premises. The fillip being enjoyed by these types of plant at the moment will have a definite effect in the reduction of smoke emission particularly in the central areas of the city. The scope and nature of these improvements are reflected under the headings given.

New steam boilers installed to give increased power	28
Mechanical stokers fitted to steam and heating boilers ...	51
Secondary air smoke preventers fitted to steam boiler furnaces	4
Furnaces in which anthracite, coke, or other non-bituminous fuels have been substituted for bituminous coal ...	30
Steam boilers replaced by electric motors using public power supply	3
New chimneys erected or existing chimneys heightened to give increased draught and to carry spent gases higher ...	17
Heating plants being fired with oil fuel, replacing bituminous coal	15
Improvements to furnaces not coming under any of the above headings	20

A few of the extensive improvements referred to above might be cited.

At the Dalmarnock Power Station, operated by the Electricity Department of the Corporation of Glasgow, an extension programme was completed during the year consisting of six large Yarrow type water-tube boilers, mechanically stoked with chain grate stokers, mechanical grit arresters, and a preheated forced draught system. For some time past this station has at certain periods been working on considerable overload, and the large increase in capacity now completed will have the effect of obviating forced firing conditions. During the period referred to the chimneys at this station were not altogether satisfactory but since the extension conditions have been satisfactory.

At the Pinkston Power Station, operated by the Transport Department of the Corporation of Glasgow, the extension and replacement programme which has been carried through since 1929 was continued, and during the year another large water-tube boiler unit of the Babcock and Wilcox type, complete with chain grate

mechanical stoker, grit arrester, and all necessary auxiliaries, was installed. The large units now operating at this station have replaced a much greater number of smaller and older units. A notable feature in this station is that the conversion has been carried through without interruption in the output of the station.

At the Clyde Valley Electrical Power Company station at Yoker a further extension programme has been carried through and during the year four very large water-tube boilers have been added in a new wing of the station complete with all mechanical auxiliaries, stokers, grit collectors, air preheaters, &c. This station was also one which during certain periods operated at considerable overload. The addition should have the effect of remedying this. It might again be stated that a year or two ago the grit emission from the chimneys at this station was very considerable and occasioned widespread complaint. The company dealt with the matter very expeditiously in the installation of mechanical arresters, and while the operations are now extensive, trouble from this source has been entirely eliminated.

At a large steel works in the east-end of the City two large Stirling type water-tube boiler units have been installed together with a steam accumulator. This extensive programme has replaced their smaller units resulting in the loading conditions on the plant being much reduced. The chimney connected with the old plant was most unsatisfactory the smoke issues over certain prolonged periods being very heavy. Conditions are now satisfactory in spite of the increased activity prevailing as compared with several years ago.

The chimney connected with the heating plant at a large secondary school in the south of the City had for years been the subject of much complaint. During the year four large heating boilers fitted with mechanical stokers have been installed replacing the older obsolete plant. The reduction in load and the uniform combustion conditions now obtaining have resulted in a comparative degree of smokelessness.

Investigation of Complaints.—The number of complaints of smoke nuisances being received by the department continues, the complaints handled by the inspectors being of daily occurrence and are the result of letters and personal or telephone calls, many of such callers being in a very heated frame of mind when intimating the complaints. As a rule the complainers are very definite as to the nature and extent of the nuisance, the drawback from the inspector's point of view being that the complainer asserts that the nuisance is "every day and all day." This is seldom the case. The nuisances caused are usually intermittent although maybe frequent, and it is the uncertainty of the smoke emissions which occupies so much time in these investigations. Almost every complaint necessitates initial and follow-on observations and inspections before it can be confirmed and the necessary warning and advice given. A small number of the total cannot be confirmed at all, complaints resulting from the operation of process plants being the most difficult to handle.

Prosecutions.—During 1937 a total of 28 prosecutions were taken against persistent offenders for the issue of excessive smoke from the chimneys connected with the plant used by them. These cases,

being essentially of a technical nature, are taken to the Central Police Court and are heard by the Stipendiary Magistrate. Included in the above figure are three prosecutions taken by the Traffic Police under the Motor Vehicles (Construction and Use) Regulations, 1931. Technical assistance is afforded the Police in these cases by the inspectors when necessary, evidence being given in defended cases. Prosecutions taken by the department are instituted under the terms of the Glasgow Police (Further Powers) Act, 1892, Section 31. Legal action is only taken after the offender has been previously warned, in some instances, depending on the circumstances, on several occasions. Technical advice is always offered to plant users by the inspectors and it is only when it is felt that such advice is being persistently ignored that legal action is taken. At the expense of reiteration it must be stated that the department much prefers an amicable abatement of a nuisance to a successful prosecution. Of the 28 prosecutions taken, 17 were in respect of first offences the average penalty being £1, and there was also one admonition; eight cases were in respect of second offences, the average penalty being £1 10s.; two cases involved third offences with an average penalty of £3; while one was in respect of a fourth offence, the penalty being the maximum of £5. Convictions were obtained in every case and the total fines imposed amounted to £37 10s., the average thus being £1 8s. 10d. An offence, if committed at any time within five years of the immediately previous conviction becomes a second or subsequent offence.

Grit and Dust Emission.—A number of the complaints dealt with during the year referred to the emission of dust, grit, and carbonised debris from adjacent chimneys, and several were of an extensive nature. It has already been mentioned in recent annual reports that this type of nuisance is on the up-grade, the reason being the increasing use of forced draught systems in combination with small grade fuels and the position is further aggravated when the plant is operated under forced conditions. Nuisance arising from this cause is actually a physical irritant and in some of the instances dealt with definitely dangerous particularly as far as eyesight is concerned. The substitution of larger grades of fuel, the reduction of steam loads, and the installation of mechanical grit arresters had the desired effect of removing the cause of nuisance. A number of firms engage in the practice of burning considerable quantities of paper and other debris in steam boiler furnaces and also in specially constructed incinerators, and very frequently give rise to nuisance

from such carbonised and semi-carbonised debris being precipitated in the immediate neighbourhood. The fitting of suitable screens in the base of the chimneys has invariably had the desired effect; in others it was insisted that the practice be discontinued and the waste material sent to the Corporation destructor plants, this usually involving some expense to the plant user for the collection of "trade refuse."

Burning of Wood Refuse, Sawdust, Etc.—The destruction of such refuse in large bulk has always created a problem so far as heavy smoke emission is concerned, and a number of devices for this purpose have been tried out by sawmills, etc., but the results are by no means satisfactory. Extended Dutch ovens under water-tube boilers, special chutes, drag conveyors, and positively driven dispersers are among such devices. In one very large sawmilling and timber plant where the main steam power is derived by the burning of such waste experiments are still being carried out to find a satisfactory solution, the position in this case being made very difficult owing to the large percentage of resinous and creosoted chips involved. The firm insist very strenuously, that since their total power requirements are obtained from this source, the reduction in the amount of material burned that would be necessary to ensure almost smokeless conditions would upset the economic arrangements of the business. This aspect of the work was referred to at some length in the report for 1935.

Fumes from Coke Ovens.—A large coke oven plant was erected in the south-side of the City a few years ago, the volume of coke produced being very large. The operation of this plant has caused widespread complaint on account of the emission of fumes, and in collaboration with the Divisional Sanitary Inspector the smoke inspectors have carried out much observation work at all hours of the day and night. The fumes were occasioned by the effluent water from gas washing and to some extent from the vapour arising from the quenching towers but more particularly from the escape of raw hydrocarbon gases during the charging operations. A special precipitation gauge was set down in the neighbourhood and from this it was ascertained by the City Analyst at the periodic analyses of the rain water that the SO_3 content of the atmosphere in the area was certainly very excessive. In consultation with the Inspector under the Alkali Acts, the management were interviewed

on several occasions and various improvements and adjustments carried out on the plant. These have resulted in a diminution of the alleged nuisance to some extent but further improvement is still looked for before it can be said that the plant has proved to be without nuisance. There will always be certain "characteristic" odours involved in the process.

Smoke Nuisance from Heavy Road Vehicles—Steam Wagons and Heavy Traction Engines.—The number of these vehicles operating in and around the City as compared with that of several years ago is very small indeed, and those now used are of the most modern design the majority being fitted with modified types of water-tube boilers. The fuel in use is a high quality "tractor" low volatile coal and hence little smoke is experienced. Two prosecutions were instituted during the year by the Traffic Police in respect of two such vehicles and a conviction was recorded in each case.

Steam Rollers.—Relatively only a small number of these heavy appliances operate within the City but as few of them use the "tractor" types of fuel, where there is any degree of carelessness or lack of skill displayed in the stoking of the boilers, very heavy smoke is emitted. This is usually the case when the vehicle is stationary. Owing to the number of new housing areas necessitating the laying of new and the redressing of existing roads in such localities, several complaints were received during the year from these sources and warnings were given to the respective drivers. A prosecution was taken by the Police against one such type of vehicle in a residential area.

Compression Ignition Engined Vehicles.—Considering the great number of buses and commercial vehicles now fitted with this type of power unit, it is surprising how little excessive smoke is emitted from the exhausts as compared with the number of cases dealt with only a few years ago when this type of engine for these vehicles was not so common. Great advances have been made within the past year or two in the design of these engines, particularly in the fuel injector systems, while the grades of oil used are higher than was formerly the case, it being found to be more economical to use such better grades. The Mobile Traffic Police are very vigilant in this connection and any nuisance caused would be immediately reported.

Tar and Pitch Melters.—The extending practice of having tar and pitch melted in central premises in large stationary appliances and rapidly transported to the site of the job in the streets has had the result of drastically reducing the number of such portable units used throughout the City, and from this cause alone much less smoke is now experienced from these melters than was formerly the case. In addition, coke is now used exclusively in the portable types employed by the Corporation departments such as Transport and Statute Labour, particularly in the melting of hard pitches, and it is only in isolated instances where the normal supply has run out or where a very small appliance is being used for some special job, say, by general contractors, that trouble is experienced from excessive smoke emission. These small units can be very obnoxious and can alter the atmospheric conditions in a confined area for hours on end. During the year several warnings were given in respect of occurrences such as these.

Shipping in the Harbour.—The shipping areas within the City boundaries being included in the respective observation districts in which they are situated were under the usual routine and special observation during the past year. It has always been the practice to send to each company or agent involved when the occasion necessitated an initial warning notice. The results of such warning notices were that incoming vessels have been warned as to the restrictions existing, and in view of this marine staffs are now generally aware of the fact that smoke emission must be kept within the prescribed standards. Having regard to the large volume of traffic—from large ocean-going vessels to smaller coastwise and river craft—the harbours are now surprisingly free from any serious nuisance. A contributory reason to these conditions is that the marine staffs are highly skilled and when they care to exercise this skill, as is the case in a restricted harbour area the results are conducive to the minimum of smoke emission. The smoke inspectorate, being themselves marine engineers, are well qualified to offer advice to the engine-room staffs, having regard to the different working conditions of marine practice as compared with shore procedure. During the year 30 warnings were given to various types of ships and river craft, and in one instance a prosecution was taken against a recurring offender.

Classes in Smoke Abatement and Boilerhouse Practice—22nd Annual Winter Session.—The evening classes for the instruction of stokers, boiler attendants, plant engineers, and others in the prin-

ciples of fuel combustion, boiler efficiency, and furnace management, held under the joint auspices of the National Smoke Abatement Society (Scottish Branch) and the Corporation of Glasgow Public Health Department, concluded the session on 8th March, 1938. Since the commencement of these classes in 1910 (suspended during War years) over 2,200 men have enrolled. The continued popularity of these winter sessions is remarkable, quite a number of men coming from outside areas at considerable inconvenience to themselves, and is continued evidence of the practical value of these annual courses of instruction. The lectures are not in any way of a popular nature but constitute a definite course of technical study. The usual two classes—ordinary and advanced—were carried on during the session at each of which twelve lectures were given—a total of twenty-four—and in addition two refresher lectures were given to candidates for the Certificate in Boilerhouse Practice of the Department of Technology of the City and Guilds of London Institute. The Senior Smoke Inspector is the lecturer. The fee payable in the classes is the nominal one of 3s. 6d. During the latter half of the course two of the lectures were fully illustrated by lantern slides, while the very comprehensive series of wall charts and working models owned by the Branch and the Department were made full use of. Towards the end of the session visits were paid this year, as last, to the Pinkston Power Station of the Corporation Transport Department, to the Refuse Destructor Power Station of the Cleansing Department at Govan, and also to the Yoker Power Station of the Clyde Valley Electrical Company. A very large number of members turned out at these visits which were much appreciated. In the ordinary class 103 men enrolled and in the advanced class 44, making a total of 147—an exceptional figure—which maintains the very high enrolments of recent years. The written examinations were held on Saturday, 12th March, 1938, when 90 men came forward—64 from the ordinary class and 26 from the advanced. Forty men in the ordinary examination and 20 in the advanced gained merit certificates, the first three eligible members in each of the respective lists being the prize winners, i.e., only *bona fide* stokers or boiler attendants. The annual social meeting of the Branch will be held at the beginning of May when the certificates and prizes will be distributed.

Soot Collecting Gauges.—Until the beginning of 1937 there were nine collecting stations throughout the City—north, south, east, west, central, etc.—all with two exceptions being situated in the

public parks. These gauges had been *in situ* since 1914 and it was felt from the results observed since that time that several of these gauges had served their purpose and that some rearrangement was necessary. Consequently, at the beginning of 1937 the number was reduced to five, these being now situated as follows—north, Ruchill Hospital; south, Queen's Park; east, Tolleross Park; west, Victoria Park; and central, Glasgow Cross. In addition, it might be mentioned that for a period two check gauges were maintained, one at Mearns Kirk Sanatorium (seven-and-a-half miles south-west of the City) and one at Robroyston Hospital (approximately six miles north-east of the City). These were in the line of the prevailing winds and have now also been discontinued, the necessary information having been obtained from them. During the past two years an experimental station has been maintained at the northerly end of Loch Katrine and much interesting information has already been obtained from it. The contents of the gauges from these stations are analysed monthly by the Corporation Chemist and from the results obtained is determined the extent of the atmospheric precipitation consisting of soot, dust, and other soluble elements such as sulphates (SO_3), chlorine (Cl), and ammonia (NH_3). During 1937 the precipitation of impurities as indicated by the gauges amounted to an equivalent figure of 231.66 tons per square mile over the City which, compared with the preceding year's total of 267.07 tons, shows a decrease of 35.41 tons per square mile. It is to be noted that the fall of impurities varies directly as the rainfall and particularly as to its incidence, the total rainfall for 1937 being 750.72mm. as compared with 859.03mm. for the year 1936. The monthly mean precipitation during the year was 19.30 tons as compared with a monthly mean precipitation of 22.25 tons during 1936, a mean monthly difference for the year of 2.95 tons. The corresponding mean monthly figure for rainfall shows a reduction of 9.03mm. during 1937. A comparison between the six "summer" (April to September) and the six "winter" (October to March) months gives a mean figure of 18.15 tons per square mile for "summer" and 20.45 tons for "winter," the corresponding mean rainfalls being 60.06 and 65.06mm.—an increase of 2.3 tons during the "winter" with an increased rainfall of 5mm. During the month of February the rainfall was abnormal, being 118.82mm. with a corresponding precipitation of 28.14 tons per square mile, while

the succeeding month of March had a precipitation of only 10.33 tons with a rainfall of only 24.91mm. It has been noted from past records that when very strong due westerly winds prevail the chlorine content immediately increases, due to the higher salt content precipitated.

As a matter of interest, it is to be noted that the results from the remote Loch Katrine gauge showed a mean monthly rainfall of 135.41mm. and a mean monthly precipitation of 10.67 tons per square mile. It has also been noted in this connection that when the prevailing wind-drift is from the industrial area of Glasgow and Lanarkshire the total solid precipitation at the Trossachs is immediately increased, in one instance to almost double the average monthly figure.

The table appended hereto gives the average monthly deposit of each element of atmospheric pollution over the City stations for the year.

THOMAS M. ASHFORD,

Senior Smoke Inspector.

PUBLIC HEALTH DEPARTMENT,

GLASGOW, 21st April, 1938.

AVERAGE DEPOSIT OF EACH ELEMENT OF ATMOSPHERIC POLLUTION FOR EACH MONTH OF 1937.

English Tons per Square Mile.																														
		Insoluble Matter.				Soluble Matter.				Included in Soluble Matter.																				
		Carbonaceous other than Tar.				Total Insoluble Matter.				Loss on Ignition.				Ash.				Total Soluble Matter.				Total Solids.								
		Tar.				Ash.				Total Insoluble Matter.				Loss on Ignition.				Ash.				Total Soluble Matter.				Total Solids.				
		Rainfall in Millimeters.				Ash.				Total Insoluble Matter.				Loss on Ignition.				Ash.				Total Soluble Matter.				Total Solids.				
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SECTION XII.

GENERAL SANITARY OPERATIONS.

DESTRUCTION OF RATS.

During the past few years the occurrence of cases of infective jaundice or Weil's Disease has been reported in several places throughout the country. In the Annual Report for last year particulars were given of two cases of this disease and in the section on Infectious Diseases of this Report particulars are given of several other cases which have been followed up by the bacteriological examination of rats caught in premises in which the patients worked. Quite a number of these were found to be infected, nine out of twelve rats in one instance giving a positive serological reaction.

This invests the rat campaign with greater importance; the Department co-operates with the Department of Agriculture and Fisheries in organising a "Rat Week" towards the end of March in each year, when a circular letter is issued to all factors and owners of premises and especially occupiers of food stores, restaurants, etc., as it is in or near premises such as these that rats are most prevalent. The frequent complaints made and the fact that the advice of the inspectors is often asked for indicate that the public is taking a more active interest in vermin infestation. This is evidenced by the fact that during the past year 79 premises were made rat-proof while the number of premises remaining on the list as being rat-infested was 473 compared with 550 at the same time in 1937.

The pamphlet on "The Destruction of Rats and the Making of Buildings Rat-proof" was revised and extended and between three and four thousand of these were issued during "Rat Week" in addition to over five hundred cards containing similar information, the latter being issued to premises such as food stores, etc., where they can be hung up for continuous reference. The following is the revised leaflet:—

THE DESTRUCTION OF RATS AND THE MAKING OF BUILDINGS RAT-PROOF.

If rats are disturbed and displaced from their usual sources of food supply, they must migrate in search of other supplies. A campaign for their reduction must therefore be general and continuous if it is to be effective.

With this object, the Committee invite the co-operation of the citizens in their effort—

- (1) To destroy rats on a large scale;
- (2) To exclude them from dwellings, warehouses, and places of business generally, and to break up their nests and feeding places.

Strict watch should be kept for the appearance of rats in places not previously infested by them.

Rats gain access to buildings chiefly—

- (1) By burrowing through the earth below wooden flooring;
- (2) Along the course of drain and other pipes led through main walls in holes which are too large;
- (3) By badly fitting doors, doors broken at the foot, and other openings on ground floors; and
- (4) By stackpipes, telegraph and telephone wires, thus gaining access by way of chimneys, windows, roofs, ventilators, etc.

This may be met by—

- (1) Cementing or asphaltting earthen basements where these are burrowed;
- (2) Filling up holes or cavities in basement walls, or loosely fitting spaces through which drain or other pipes pass, with brick and cement packing;
- (3) Refitting doorways, protecting the foot, if necessary, with sheet-iron; and by wire-netting openings in basements which cannot otherwise be dealt with. Rat-runs in buildings should be discovered and destroyed;
- (4) Cutting off and sealing up old drains emerging from buildings;
- (5) Building in chimney spaces in unoccupied basement houses; removing plasterwork of ceilings and exposing joists; and avoiding the storing of old furniture, mattresses, etc. Periodical moving of stock in which rats are likely to nest should be carried out where practicable.
- (6) Outhouses, coal boxes, tool chests, etc., should be raised from the ground.

Rat Harbourage.—This is the term given to describe the enclosed spaces which afford rats hidden or partly hidden shelter, homes, and suitable facilities for breeding and protection of their young until maturity. There are three general types of rat harbourage, namely, (1) structural, (2) incidental, and (3) temporary.

(1) Examples of the first are double walls, space between floors and ceiling, hollow-tile partitions, enclosed stairways, hollow boxed moulding, raised platforms, and similar protected places.

(2) Those of the second may be cited as furniture and equipment, things that are incidental to the use that is made of a building or its sub-divisions and are installed therein.

(3) Examples of temporary harbourage are mass storage of material or merchandise, rubbish heaps, old furniture, odds and ends piled in cellars, attics, and closets, and similar accumulations which, if left undisturbed for periods of several weeks, can and will be used by rats for homes and breeding places.

Rat harbourage is to be found in the great majority of the buildings of the older type, and also in some buildings of modern construction, and in a great many styles of furniture and equipment which are installed in mercantile and manufacturing establishments.

It is useless to stop rat-holes in a house and leave the means of access to the tenement still open. Rats over-run a building behind the plaster and woodwork, in the casing of pipes, and below flooring, but they gain access at the basement.

Rats which over-run a building can be kept to the basement if the plaster and woodwork, to a height of 15 inches above the floor level, be removed and the walls cemented on the hard. Suitable means should be taken to prevent rats from getting behind the plaster or woodwork above the level to which it has been removed.

Rat-infested premises may be dangerous to the health of the tenants, and a menace to their neighbours. Landlords are requested to inquire into the presence of rats in their properties, and to take action on the above or on similar lines.

Food.—Rats are attracted to buildings in search of food. All food-stuffs should be kept in metal receptacles and care taken to cover these at night with tight-fitting lids. If food is left on counters these should have unclimbable surfaces. It is preferable, however, to keep food in larders, store-rooms or metal-lined drawers.

Ashpits, collections of garbage, stable-yards, etc., often afford food. Any refuse stored should be kept in metal bins, the covers of which should fit tightly and should not be left off.

Owners are reminded that ashpits in bad repair may be dealt with under Section 58 of the Glasgow Building Regulations Act, 1900.

There is much unnecessary pollution of back courts by tenants throwing domestic refuse from windows. Household refuse should, as far as possible, be burned by the householder.

The Local Authority rely on the willing co-operation of landlords and householders in these directions, and tenants will forward the work by informing the Public Health Department of premises which are rat-infested.

DESTRUCTION OF RATS.

Trapping is a serviceable and satisfactory method of rat destruction. Where breakback traps are used these should be strongly made with wedges to hold the upright in position.

Cage traps can be used with much success if they are left unset for a period, with free access, and suitable bait; the bait should be changed occasionally until an attractive one is found and the rats gain such confidence that they visit the traps regularly for food. Thereafter the traps may be properly set, preferably under an old sack or piece of cloth, leaving both ends clear.

Traps made with bird-lime or lithographic varnish are often successful in buildings, and can be used in places where the application of rat poison may not be suitable.

These traps are non-poisonous and should be set inside a raised surround about nine inches in height so that any rat going for the bait in the middle will be more likely to be caught in the matrix. Varnish is more effective in a warm atmosphere.

Hunting with dog, ferret, or mongoose is practicable but these can rarely follow the rat into its burrow.

Gassing is also effective where railway embankments, banks of rivers, streams, ditches, canals and farmyards, etc., are infested. This method is not suitable for tenements, warehouses, stores, etc.

Poisoning, especially by the more rapid forms, such as strychnine, arsenic, or phosphorous paste, should not be used in tenement houses, or in places to which domestic animals have access.

Barium carbonate baits are suitable in such cases, and have a retarding effect on putrefaction of the carcasses.

Use of Barium Carbonate and Squills.

In 1920 the Board of Agriculture for Scotland suggested the following three alternative recipes for the preparation of barium carbonate baits:—

(1) Barium Carbonate	...	...	...	6 ozs.
Meal	...	...	...	16 ozs.
Dripping	...	...	...	4 ozs.
Salt	...	...	...	$\frac{1}{2}$ oz.

Bait should be made into pieces as large as a hazel nut.

(2) Barium Carbonate	...	...	...	4 oz.
Biscuit Meal or Plain Meal	...	...	...	4 oz.
Oil of Aniseed	...	...	...	5 drops

Mix with fat to a paste, and lay out, in places where rats are known to be present, in pieces the size of a hazel nut.

(3) Tallow	...	...	...	50 per cent.
Barium Carbonate	...	...	...	50 per cent.

Mix with dripping to a thick paste, and spread thinly on bread cut to $\frac{1}{2}$ -inch squares.

N.B.—Barium Carbonate is poisonous in comparatively small doses for cats, poultry and dogs.

Mice are more readily caught in traps (baited with toasted cheese, oatmeal, or fat bacon) than rats, although a good cat will soon clear ordinary premises of the pests. Poisons (such as Barium Carbonate and Squills) should be used with caution.

The most attractive baits are ham, raw meat, cabbage leaves, red herring (roasted), corn and nuts. A bait which is different from the kind of food available in the place dealt with should be set. It may sometimes be useful to sprinkle a few drops of aniseed oil near the bait. Untouched baits should be removed daily.

Hot tar is sometimes useful in outside premises for compelling rats to leave their burrows.

The discovery and destruction of rat-runs is important. Rats must have frequent recourse to water, and their runs in most houses begin in the vicinity of the water closet.

Systematic destruction should be done nightly by means of cage or break-back wooden traps. When one form fails another should be tried. A trap should not be placed against the hole by which the rat gains access; it should be laid in the course of the rat run, and this, in an apartment, is usually close to the wall.

Gloves should be worn when handling traps. Immersion in boiling water, or exposure to steam, deodorises them rapidly.

Owing to the prevalence of musk rats in the country, and the possibility of their spreading to this area, any person who kills rats of this species or has reasonable cause to believe that they exist in any premises should immediately notify the nearest Police Office or the Medical Officer of Health.

N.B.—Shipowners should take every opportunity of destroying rats on board ship.

A. S. M. MACGREGOR,
Medical Officer of Health.

DISINFECTION.

The following tables summarise the washings and disinfections carried out at Ruchill and Belvidere Disinfecting Stations during the year 1937:—

	Belvidere.	Ruchill.	Total.
Number of washings	9,911	9,575	19,486
Average number per day	32.5	31.2	63.7
Articles washed and disinfected ...	315,740	359,015	674,755
Average number of articles per washing	31.8	37.5	34.6
Fuel consumed (tons)	599	514	1,123
Fuel used per article (lbs.)	4.25	3.2	3.72
Soap and powder used per article (ozs.)	0.22	0.22	0.23
Disinfectant " " "	0.60	0.58	0.61

Number of Washings, Articles Disinfected, Etc., for Years 1930-37 Inclusive.

	Washings.	Articles.	Sprayings.	Whitewashings.
1930	16,996	617,675	12,222	17
1931	18,793	678,367	13,545	13
1932	22,183	806,360	15,248	12
1933	21,526	732,967	15,485	4
1934	19,738	654,224	13,760	2
1935	18,360	630,555	13,327	2
1936	17,859	627,461	11,852	1
1937	19,486	674,755	13,198	—

Books disinfected, 1,533.

Fumigation of Vessels.—As most of the fumigations of vessels for disinfection of rats are done with HCN. by contractors, the number done with sulphur by the Department is much reduced. Information regarding this matter is given in the report of the work of the Port Local Authority, which forms Section VII.

Disinfection of Second-hand Clothing, Etc.—Disinfection of second-hand clothing for export to Ireland, as required by the regulations issued by the Irish Free State, continued to a slightly decreased extent throughout the year. In all, 409 consignments were disinfected and certificates issued, the total amount received in respect of charges being £93 16s. 10d.

Disinfection of Straw Coverings.—In order to comply with the regulations of various countries, the arrangements for the disinfection and certification of straw coverings were continued during the year. No additional names have been added to the list of those providing suitable chambers for this purpose, and the former arrangement whereby the Department is notified when a supply of packing is to be disinfected continued.

OFFENSIVE TRADES.

There were on the register of offensive trades in the city at 31st December, 69 businesses coming under this category.

There was no change in the register during the year.

The nature of the businesses is shown in the following statement:—

	1936.	1937.
Bone boilers	8	8
Tallow melters	18	18
Manure manufacturers	8	8
Gut cleaners	3	3
Hide and skin factors	9	9
Soap boilers	9	9
Tanners	10	10
Glue and size manufacturers	2	2
Horse slaughterer	1	1
Knacker	1	1
	<hr/> 69	<hr/> 69

Particulars regarding the administrative supervision of the premises in which these businesses are situated and of the renewals of registration are given in the reports by the Divisional Sanitary Inspectors which follow.

GENERAL SANITARY CONDITIONS.

The reports by the Divisional Sanitary Inspectors are included in this section; they deal with the work of the Department as given in detail in Table XXIII. of the Appendix, which contains tabulated particulars of inspections, nuisances, etc., in each municipal ward and for the city. References are made to the principal statistics for each division, and comments are made on the more important complaints or problems arising during the year.

CENTRAL DIVISION.

Complete details of the work carried out during the year are contained in tabular form in the Appendix.

Nuisances.—A complaint which is becoming widespread is that of soap suds finding their way into baths, tubs and sinks on the lower flats of tenements, when occupiers on the upper flats use their sanitary fitments. Frequently, a similar emission is noticed at the ventilating shaft of the drain on the street level, leading to a presumption that the drain is choked. Investigation shows that this nuisance arises from the excessive lather created by the use of soap powders and flakes widely advertised and rapidly coming into general use for foam baths and the household washing, especially of garments of fine texture. Evidence that this nuisance is widespread is given by the fact that inspectors in other districts in Scotland have made enquiries regarding our experience in the matter and if any remedy has been suggested.

On many occasions owners of property have been advised as to how the waste pipes and their connection to the drain might be altered to cope with the nuisance, but, in several cases, the necessary readjustments of the drainage system cannot be made. As complaints were becoming more numerous, I communicated with some of the largest soap manufacturers, and was informed that excessive lather is caused by using too much of the washing agent. The

difficulty is recognised, and one firm is sending representatives to householders to explain the proper amount of their product to use in order to avoid waste and unnecessary lather. How far such an effort is likely to succeed is problematical, and, in any case, it does not solve the question of the foam bath. Some simple method of breaking up the foam or lather before discharging the water would seem to offer the best solution, and, fortunately, this is easily accomplished. I have experimented with various foam bath powders and washing soaps forming high lather or foam and have found several agents which almost instantly disperse the lather, leaving the water clear — (1) Methylated Aether (C^4H^{100}); (2) Calcium Chloride ($CaCl_2$); (3) Methylated Spirit (C^2H^5OH); (4) Epsom Salts—Magnesium Sulphate ($MgSO_4$); (5) Common Salt—Sodium Chloride ($NaCl$); and (6) Washing Soda—Sodium Sulphate (Na_2SO_4).

The softness of the Glasgow water may be a contributory factor in this nuisance. From the domestic point of view, the sprinkling of a salt on the suds disperses the lather and eliminates the liability to nuisance. The above list gives these substances in order of efficacy, but washing soda, the commonest and cheapest salt, is effective and has in addition, a cleansing effect on the sanitary fittings and waste water pipes.

Throughout the present year, as in several years past, complaints were received from residents in Maryhill, Anniesland and Kelvindale of offensive odours in the district. Factories and works of all descriptions in these areas were visited and all the works were eliminated from suspicion except two chemical works in the area. These works were visited frequently by Dr. Wylam of the Department of Health for Scotland. Strict observations were kept and perhaps this accounted for the fact that complaints were only intermittent.

During this year, however, complaints were more persistent and Dr. Wylam again took the matter in hand. In August he took up residence in an hotel in Kelvinside and arranged that two of our inspectors should patrol the district through the night and keep in touch with him. This intensive observation convinced Dr. Wylam that there was an escape of foul gas into the atmosphere. He communicated with the owners of one of the works and suggested some alterations in the plant and in the method of working. These suggestions were carried out to his satisfaction and, to the end of the year, no further complaints have been received.

Complaints of fumes arising from Diesel oil and petrol burning motors causing annoyance and ill-health among the employees in a large garage were received towards the end of the year and somewhat extensive enquiries were made. It was found that fumes were apparent particularly in the mornings, when a large number of vehicles are being started up, especially during cold and foggy weather. The solution of this difficulty raises mechanical problems connected with the adequate removal of exhaust gases and also of ventilation. The management is aware of these difficulties and work is in hand to remedy apparent defects.

Activities against rat infestation are continuous, but, in response to the appeal from the Department of Agriculture to take intensive measures during the week 29th March to 3rd April, special inspections were made. In addition, almost 2,000 circulars and leaflets were issued to occupiers of premises known, suspected, or likely to be rat infested. The subsequent complaints received did not rise much above normal; only three complaints were received during that special week.

In the course of the rat prevention work during the year, much structural repair was carried out in many properties, in several cases somewhat extensive repairs being found necessary. It may be stated that in almost every case, owners of property were willing to put into effect the suggestions made by the inspector, the serious consequences of rat infestation being well known. In many cases, the presence of rats was due to intensive hunting campaigns in neighbouring premises, and one owner of property naively enquired if he could not take out an interdict to stop a neighbouring occupier from disturbing the rats.

In several instances, rats were found in warehouses that were modern and rat-proofed. It was discovered ultimately that the vermin came in with merchandise. In such cases, it is advisable that all bales, boxes and hampers should be examined for rat holes before undoing or unpacking. If, on inspection, a hole or holes are found, the bale, box or hamper should be placed inside a larger box before unpacking so that any rats that may be inside are trapped in the outer box. If this is not done, the rodents escape and find harbourage behind stock or fittings that cannot be easily removed.

Another common cause of the appearance of rats in buildings not previously infested, is the disturbance of the pavements outside the buildings by works of repair. The earth beneath the flagstones may not be properly consolidated and vermin can more easily make a way through the loose earth. Railway embankments and tunnels seem to be much used by rats. From the tunnel they find their way to the runnels in the subsoil behind the retaining walls. They gain access through the "weepers" and follow the track made by the subsoil water, which often leads them to the "promised land" in the shape of a grocer's or butcher's shop on the street above. This would be easily obviated by inserting an expanded metal screen into the "weeper"; the drainage would not be interfered with and the rats would be excluded.

Complaints of stray cats in the city have been numerous although less so lately. Probably because of slum clearances, there seems to have been a more extensive destruction of stray cats. The Secretary of the Glasgow and West of Scotland Dog and Cat Home states that his Society, during 1935-36, destroyed 15,993 strayed cats. The Superintendent of the Glasgow and West of Scotland Society for the Prevention of Cruelty to Animals states that 732 stray cats were destroyed during 1935-36, although this is not the primary work of the Society. There are also some private individuals or committees who do this work, having receiving offices in various parts of the city. Three of those individual agencies report the destruction of 2,000 stray cats each per annum. It will thus be seen that this work of destruction of cats is extensive—22,725 annually. There are no statutory provisions relating to stray cats but there seems to be no proprietary right in the matter. Anyone can collect cats and if they assure the people who carry out the work of destruction that the cats are strayed, then they are destroyed.

In the report for 1935, it was mentioned that complaints were made of pigeons nesting about buildings and causing nuisance. Complaints of this nature are still received. The Procurator-Fiscal has ruled that pigeons are not wild birds and it is not an offence under the Protection of Wild Birds Act to have them destroyed. The police will only intervene in the destruction of the birds (a) if firearms are used in a public place for that purpose; (b) if poisoned grain is laid down where other birds would find it; and (c) if the birds are private property. The officers of the Society for the Prevention of Cruelty to Animals say that humane methods must

be adopted in destroying the birds. They suggest that they should be caught alive, either by nets or by being enticed into traps, and afterwards handed over to them and they would undertake their destruction. Complainers are accordingly advised that an officer of the Society will assist them on application.

The Shops Act, 1934.—This Act makes provision for the ventilation, heating and lighting of all shops and warehouses. It also makes provision for securing facilities for taking meals, washing and sanitary accommodation. As a preliminary to enforcing the provisions of the Act, a survey was carried out, when it was found that there are 6,192 shops and warehouses in the Central Division employing 45,435 persons. The survey revealed that the lack of heating facilities was most pronounced and so considerable attention was devoted to this matter. Since the survey was made, heating facilities have been installed in 420 shops which were previously without any form of heating.

New Buildings.—Improvement in industry has had its effect in the many new buildings and additions erected in the centre of the city. A large property erected during the year was the Road Transport Hostel and Garage in Washington Street. A high standard of efficiency is demanded in the provision of sanitary fitments. Thus, every hotel and the larger boarding houses instal washhand basins in every bedroom. In some hotels and clubs a bathroom for each bedroom is provided. All this calls for vigilance on the part of the drainage inspectors and ability to meet the many problems that arise. Architects, builders and plumbers, aware of the wide experience of our drainage inspectors, are in daily consultation in arranging such works.

Ashpits.—As long ago as 1922, the question of ashpit versus ashbin was raised in the Partick area. Many complaints had been received regarding smells and dust from the ashpits causing a nuisance. An extensive survey was made and a lengthy report submitted. Of 2,130 tenements, containing 20,402 houses and shops, inspected, 1,175 were found to be provided with ashpits and 784 with ashbins. The ashpits were generally of large size and deep, constructed of brick, uncovered, with bottom unpaved, and sunk below the level of the court. A great many were found in a dilapidated condition. Being situated in the open court, they formed a handy receptacle for street hawkers' refuse as well as the tenants

domestic refuse, and, being exposed to the rain, they, in warm weather, became a nuisance and a menace to public health. Several meetings were held with the owners, representatives from the Master of Works' Department and the Cleansing Department, to bring about an improvement. Section 58 of the Building Regulations Act provided power to order the substitution of ashbins for ashpits, but action could not be taken under this provision because the Glasgow Boundaries Act, 1912, under which Partick was added to the city, excluded the Burgh from the provisions of the Building Regulations Act on this question. However, in Section 69 of the Glasgow Corporation Order Confirmation Act, 1927, this exemption contained in Section 33 of the Boundaries Act, 1912, was withdrawn, and it was possible to take action under the Building Regulations Act to have the ashpits demolished and ashbin accommodation provided. This work has been carried on during the present year, and, up to the present time, almost one thousand of the old ashpits have been demolished and ashbins substituted.

Water-Closets, Etc.—There are 3,382 common water-closets in the Division, 1,069 of which are common to two tenants, 1,313 common to three tenants, 755 common to four tenants, and 245 common to five or more tenants.

The number of houses with baths is 29,513, or more than 50 per cent. of the total houses in the Division.

The houses without an indoor supply of water number 95. This is a reduction of 111 from last year's total of 206, all of which is the result of operations under the Housing (Scotland) Act, 1930. The remaining houses are either in isolated positions or are likely to be the subject of action under the Housing Acts in the near future and it would hardly be reasonable to insist upon the introduction of water supply to each house in a building which is almost worn out.

The privy middens number three and serve 11 tenants. During the year, the vacating of houses in Knightswood Rows reduced the number by 19. Pail closets number 15, serving 15 tenants. Lack of sewerage in the near vicinity to these isolated houses accounts for the retention of the conveniences.

There still remain 276 ashpits, all serving more than five tenants. Of these, 212 are in the Partick area and are in process of conversion into ashbins, as mentioned in the preceding paragraph.

Common Lodging-Houses.—There are thirteen Common Lodging-Houses and two Seamen's Boarding-Houses. In the lodging-houses for males, there is accommodation for 2,556 lodgers, and in the three lodging-houses for females, there is accommodation for 310. There are now only two seamen's boarding-houses, namely, The Sailors' Home, Broomielaw, and The Asiatic Home, Queen's Dock. Those two houses have accommodation for 190. Registration was refused in the case of one small boarding-house in Broomielaw.

There has been one notable addition to the list of lodging-houses made during the year. The Salvation Army for many years occupied premises at 207 High Street as a Rescue Home and Lodging-House. Some years ago they purchased from the Corporation the disused Police Barracks at 14 Clyde Street. These premises have been completely reconditioned and opened as a Common Lodging-House for Females with accommodation for 203 lodgers. The house at 207 High Street vacated by the Salvation Army has been taken over by another keeper and registered as a lodging-house for males. The demand for better housing facilities noted elsewhere in this report extends to Common Lodging-Houses and only those houses providing good accommodation are well patronised. The "bunk" bed has now entirely disappeared; the last of these were converted into cubicles during the year. The monthly reports indicate that all the houses are well kept.

Farmed-out Houses.—The number of Farmed-out Houses on the Register at the end of the year was 269 (190 of one-apartment, 77 of two-apartments and two of three-apartment). All of them are situated in Exchange ward and 72 per cent. of them are in the proposed Balmano Brae Redevelopment Area. The numbers represent a reduction of 66 houses from the previous year. The Farmed-out House is disappearing, mainly as the result of slum clearance work. In one case, a tenement of ten houses was reported by the Master of Works to the Dean of Guild as unsafe and the occupiers were ordered to remove. In another case, the owner had permitted a tenement of 18 houses to get into such a state of disrepair that it became necessary to represent the houses as unfit for habitation under Section 16 of the Housing Act, 1930.

An application for the recall of the resolution declaring 32 houses at 58 and 64 Castlebank Street to be Farmed-out Houses was granted. This was the sequel to an interesting episode extending over a considerable period and the results were instructive.

These houses had been registered as Farmed-out Houses for many years. A report was made regarding a portion of the front wall. The wall was inspected, found to be bulging and was reported to the Master of Works. The Dean of Guild ordered the wall to be taken down and rebuilt and this necessitated the removal of four families. No alternative accommodation was offered them and they refused to remove. At the same time, the other occupiers ceased to pay rent and demanded that all the houses should be condemned and alternative accommodation provided. Eventually, a settlement was made. The four occupiers primarily concerned were rehoused by the Corporation and the principal tenant reduced the weekly rent of the others from 11s. to 6s. 6d. This arrangement held for four weeks, when the occupiers again went on Rent Strike and barricaded themselves in the houses. The principal tenant, through loss of rent, was compelled to relinquish his let and the houses were taken over by the owner. He informed the occupiers that the houses would henceforth be let as ordinary monthly houses at 25s. Any who refused to pay the monthly rent were summoned to the Sheriff Court. Since then, matters have improved. Several of the tenants have been evicted for non-payment of rent, but the others are doing well and the houses are kept in good condition. Of the four tenants who were rehoused by the Corporation, two have already left owing to non-payment of rent.

Nurse Inspectors' Work.—On the whole, the tenants of the Rehousing Schemes have maintained a good standard of cleanliness. There are, of course, a few who require more intense supervision to keep them at the required standard. Electricity has been introduced into Yorkhill and Earl Street Schemes and this is much appreciated, but the tenants of these Schemes are still at a disadvantage in that they lack the facilities of washing boilers in their sculleries. This necessitates the use of the Public Washhouse, and, in each case, the nearest Public Washhouse is a considerable distance from the Scheme. In the case of the Earl Street Scheme, the nearest wash-house is at Whiteinch, almost a mile distant.

One hundred and thirty-six tenants went into occupancy at the Fulton Street Rehousing Scheme during the year, mostly from the Netherton, Knightswood Rows and Partick areas. Five of these have already removed, two can only be described as "fair" but the others are cleanly tenants and are quite satisfactory. Much care, however, has been found necessary to prevent bugs appearing,

caused mainly through the introduction of second-hand furniture. Sixteen of the houses had to be sprayed after occupancy and five had to be specially treated, three definitely through the introduction of bug-infested pictures.

School Work.—The necessity for constant supervision of certain school children was emphasised during the Winter months, when the nurse inspectors were deflected from their usual school work to attend pneumonia cases, the result being an increased number of infested children. Fortunately, these cases responded quickly to the advice given to the parents on home visitation and it is very seldom that a really bad case of infestation occurs. In one case, a tenement of 34 houses was so badly kept, despite repeated warnings, that it was found necessary to take Court proceedings against the keeper. The Stipendiary Magistrate continued the case again and again, until the houses were brought up to a standard of cleanliness and furnishing satisfactory to the nurse inspectors, and ultimately imposed a fine of 20s.

On the request of the lady superintendent of the Domestic Training Centre, the nurse inspector makes a bi-weekly visit to the Centre. The girls in training submit to an inspection similar to that carried out in the schools, and are given advice on personal hygiene. This inspection is entirely voluntary on the girls' part and seems to be appreciated. The lady's superintendent is very pleased with the result of these visits and appreciates the help thus given by the Public Health Department.

WILLIAM ROY,
Divisional Sanitary Inspector.

NORTHERN DIVISION.

The number of houses in this Division at May, 1937, was 68,991. Of that total, 10,061 were houses of one apartment, 32,388 were of two apartments, 19,760 of three apartments, 4,996 of four apartments, and 1,786 of five apartments and over. As less than three per cent. of the houses are of five apartments and over, the housing accommodation may be described as being almost wholly for the working classes. The population of the nine wards comprising the Division was 288,743.

Nuisances.—Nuisances and other matters dealt with during the year are detailed in the appended tables. Of the complaints received by letter or otherwise, and they were both numerous and varied, the majority had to do with unsatisfactory housing conditions of one kind or another—evidence of a widespread and in most cases perfectly understandable desire for better housing accommodation. Unfortunately, because of the continued lack of suitable houses, adequate remedy for the conditions complained of was in many instances found to be impossible.

An offensive smell which pervaded the St. George's Cross locality was found to have been caused—inadvertently—by a discharge from a chemical work into one of the public sewers. After the source of the trouble was discovered, the nuisance was speedily abated. Another smell which was the subject of many complaints arose in the Possil district as a result of a fire which occurred in an oil work there. Some 800 tons of cotton seed and oilcake were damaged by fire and water, and a smell of a particularly nasty and pungent nature was caused. The remedy was effected by the removal of the offensive material, and this was carried through as expeditiously as was possible in the circumstances. Two complaints of smells in dwelling-houses were investigated and, to the astonishment of the tenants concerned, the cause of complaint was traced to electric light shades of the type which when heated give off offensive odours.

Drainage.—The construction of drainage in connection with 934 houses erected in housing schemes was supervised, and the smoke-test applied before the houses were occupied. Only one house was erected by a private owner during the year.

Important buildings completed were the Glasgow and West of Scotland Asylum for the Blind, in Possilpark; a large office block in Killermont Street for the L. M. & S. Railway Company; and a new cinema in Springburn. The erection of new sanitary conveniences in factories also had attention, and in this connection it may be noted that, on the initiative of the owners concerned, 40 modern water-closets and sufficient urinal accommodation were installed in lieu of eight pan privies and two trough latrines.

Slum Clearance.—The Burnside Street Clearance Area Compulsory Purchase Order, 1936, was the subject of a public enquiry held in the month of March, 1937, by a Commissioner appointed by the Department of Health. The Clearance Area, which included two

areas, one in Burnside Street and the other in Roslin Place, comprised 105 houses, two shops, and a store. Of the 105 houses, 97 were included in Part I. of the Order and eight in Part II. The unfit houses had the defects usually found in old, worn-out, working-class tenements, and the Order was confirmed subject to only a very slight modification. By the end of the year 91 of the families had been rehoused.

Demolition Orders and Closing Orders were made in terms of Section 16 of the 1930 Housing Act with regard to 431 dwelling-houses, and by the end of the year 43 of these had been demolished, 218 were closed, and 170 remained in occupation. The total number of families rehoused during the year as a result of action taken in terms of Section 16 was 282, affecting 1,161 persons. An appeal to the Sheriff against a Closing Order made with reference to two tenements in Garngad Road was lodged by the owner and led to an important legal decision. Thirty houses were involved, and the principal sanitary defects were lack of light and ventilation, inadequate water-closet accommodation, and bug-infestation. When the appeal came before the Court, evidence was led at considerable length on both sides, and although the owner offered to carry out certain improvements, it was held by the Sheriff "that the houses are not fit for human habitation and that the offer made by the pursuer would not make them so." The appeal was therefore refused and the Closing Order affirmed.

Decrowding.—The number of houses decrowded in 1937 as a result of action taken by the Local Authority was 488, of which 102 are owned by the Local Authority and 386 are privately owned. The following tables show the number of persons affected by the decrowding operations, the number of houses in which after re-occupation the permitted number was not exceeded, and the number which again became overcrowded.

TABLE I.

LOCAL AUTHORITY HOUSES DECROWDED.

Number and Size of Houses Decrowded.		Total Number of Inmates prior to Decrowding.	Total Number of Inmates after Houses were Re-occupied.
73 of 2-apartments	...	466	177
27 of 3-apartments	...	204	121
2 of 4-apartments	...	19	13
Total	... 102	689	311

In only five of these houses was the permitted number exceeded by the incoming tenants, and that in each case by only one half unit. As will be observed, the number of persons occupying the houses prior to decrowding was more than twice the number in the families who afterwards took up the occupancy of the houses.

By the process of decanting, 67 overcrowded families in rehousing schemes were transferred to larger houses. In 40 instances the change was from two-apartment houses to houses of three apartments, 22 families went from two-apartments to four-apartments, and five from three-apartments to four-apartments. Particulars of these are included in the foregoing table.

TABLE II.
PRIVATELY OWNED HOUSES DECROWDED.

Number and Size of Houses Decrowded.	Number of the Houses which are not now Overcrowded.	Number of Decrowded Houses which were Overcrowded by Incoming Tenants.			Total Number of Persons prior to De-crowding.	Total Number of Persons after Houses were Re- occupied.
		Over- crowding Reduced.	Over- crowding Unchanged.	Over- crowding Increased.		
121 of 1-apartment	93	23	3	2	661	270
233 of 2-apartments	199	24	8	2	1,351	681
31 of 3-apartments	25	4	—	2	237	127
1 of 4-apartments	1	—	—	—	10	4
Total ... 386	318	51	11	6	2,259	1,082
	82%	13%	3%	1.5%	Average = 5.8 per House	Average = 2.8 per House

All of these houses were re-let subsequent to having been decrowded, and as shown in the foregoing table, 318 (82 per cent.) were so occupied by the incoming tenants that the permitted number was not exceeded. In 51 instances (13 per cent.) it was found that the houses had again become overcrowded although not to the same extent as formerly. In 11 houses (3 per cent.) the position with regard to overcrowding was exactly the same as it was before the houses were decrowded, and in 6 houses (1.5 per cent.) overcrowding existed in a greater degree than before.

Of the 488 families included in the foregoing tables who became the tenants of the decrowded houses, 275 (57 per cent.) came from other houses within the city, 168 (34 per cent.) were newly married couples, 30 (6 per cent.) were families from lodgings, and 15 (3 per cent.) were families from outwith the city.

The whole of the 488 overcrowded families referred to were rehoused in Local Authority houses.

With regard to 383 houses which were decrowded in 1936 and referred to in the Annual Report for that year, a re-inspection made towards the end of 1937 revealed that no material alteration of the number of units occupying the houses had taken place.

The number of houses decrowded as a result of action taken by private owners is not known, nor is the number that have become overcrowded since the survey of 1935 was made.

Rehousing Schemes.—By 31st December the number of houses under supervision by the nurse inspectors was 6,073, an increase of 404 since the same date last year. The number of visits to the houses was 25,840—an average of approximately four per house. The number of visits to individual houses, however, varies considerably. They are reduced to a minimum in the case of clean, well-kept houses, but the indifferent and negligent housekeeper requires and receives regular and frequent visitation. Tenants can therefore themselves regulate to a considerable degree the number of visits from the nurse inspector, and that is pointed out to any who find the often repeated visits irksome. In new schemes particularly, frequent inspections of the houses are necessary in order to gauge the reaction of the householders to their new environment and to decide into which of the categories—clean, fair, or dirty—the houses should be placed. Much of the after-success of a scheme, from the public health point of view, depends on the influence the nurse inspector can bring to bear on the tenants during the first few months of their occupancy of the new houses, and close supervision at the beginning is also essential because in spite of all the precautions that are taken to prevent the transportation of bugs, it is found that in a certain number of cases they are carried from the old houses to the new. Particulars of the manner in which the houses were kept will be found elsewhere in this Report.

Part of the duties of the nurse inspectors is to note items of disrepair, etc., found in the houses, and during the year 408 defects were referred to the City Improvements Department for attention.

Houses in which the keeping of lodgers was suspected by the resident factor were visited during the night. Lodgers were found in 54 of 103 such houses visited, and in 37 instances the lodgers

were said to be related to the householders. The worst case of overcrowding by lodgers was that of a two-apartment house which was occupied by the householder's family, consisting of six persons and a lodger family of four—ten persons in all.

Verminous Children.—Visits to schools for the purpose of examining children suspected to be verminous or dirty numbered 199, and of the 3,066 children submitted for inspection, 1,112 (36 per cent.) were found verminous in some degree, while 79 were dirty. Visits were afterwards paid to the homes of these children in order to ascertain the conditions prevailing there and to instruct any necessary cleansing operations. In one of these homes the conditions were found to be very far from satisfactory, the house and the bedding being in a filthy state. Advice and persuasion were not effectual in securing improvement in this case, and ultimately legal proceedings had to be taken against the tenant. When the case came before the Court, it was continued for three months—ample time to clean up the house—and on the expiry of that period, no effort having been made in the interval to improve matters, the offender was again brought before the Court and a fine of 20s. was imposed.

Sanitary Conveniences.—A survey completed towards the end of the year disclosed that of the total number of houses in the Division, 38,756 (53 per cent.) have individual water-closets. It was also found that in the case of houses of not more than three apartments 51 per cent. were provided with separate w.c. accommodation. It can therefore be said that the majority of working-class houses now reach that standard of accommodation. This has significance in view of the terms of Section 49 of the 1930 Housing Act, in which it is laid down that in determining whether a house is fit for human habitation regard shall be had to the extent to which the house falls short of the general standard of housing accommodation for the working classes in the district.

Water-closets used in common by two or more tenants number 9,170. Of these, 1,909 serve two tenants, 5,469 serve three, 1,952 serve four, 272 serve five, 79 serve six, 21 serve seven, and 8 serve eight.

Seventeen houses of one apartment, 35 of two apartments, and 10 of three apartments are without inside sink accommodation, while 73 dry closets serve the occupants of 100 houses.

There are 430 ashpits, 21 of which serve one tenant, 5 serve two, 4 serve three, 5 serve four, and 395 serve five or more.

The number of houses with baths is 22,254, or approximately 32 per cent.

Rat Destruction.—All the year round effort is made to deal with the rat problem, but during Rat Week it had special attention with a view to stimulating public interest and action. Circulars drawing attention to the provisions of the Rats and Mice (Destruction) Act and giving information as to the best methods of overcoming rat-infestation were issued to owners and occupiers of premises in which the presence of rats was suspected. Notices in terms of the Act were served on the occupiers of two stables and a contractor's yard who failed to take sufficient steps to render the premises rat-proof, and the necessary work was thereafter carried out. Extensive rat-proofing operations were carried out with complete success in a bakery establishment that had been seriously infested for some time. Although the cost of the work was considerable, it was trifling in comparison with the amount of the damage that was being done, and the occupier of the premises is quite convinced that the expenditure involved was well worth while. Our inspectors advise and assist, as far as possible, in cases of rat-infestation, but their assistance is seldom so generously acknowledged as it was in the following excerpt from a letter sent by the occupier of the bakery premises referred to:—"After eight weeks' intensive campaign against rats in our premises, I feel that I owe to your Department a deep debt of gratitude for the advice and assistance I have received. I would especially mention your inspector, who has been a wonderful adviser all through. To him much of the credit of our immunity must go. You will remember from your visit the difficult task we were faced with, and will understand my satisfaction that to-day we can go from end to end of our premises at any hour of day or night and neither hear nor see any sign of rats." It may be added that that is still the position nine months after the completion of the work.

Common Lodging-Houses.—Regular inspections of the five lodging-houses were made. While they are well-kept generally, occasion arose to institute legal proceedings against an occupier for a contravention of the bye-laws which was regarded as of serious importance. The charge against the lodging-house keeper was that he failed on three consecutive days to cause the bed in a compartment to be

vacated by the night sleeper, and failed to have the compartment cleared before 9 a.m. each day; also that he failed to cause the bed and bedding in said compartment to be turned over and exposed to the air from 9 a.m. until 1 p.m. on each of the three days—all contrary to the bye-laws for the regulation of common-lodging-houses. The offender, who pleaded guilty, was fined £3. The serious feature of this case was that the body of a man was found in a cubicle which had not been entered for the three days preceding the finding of the body.

Storage Cisterns.—Inspections of storage cisterns for dietetic water supply were made, and a considerable number were found in a dirty or otherwise defective condition. Notices issued to the owners concerned secured the necessary cleansing. Undernoted is a statement showing the number of storage cisterns and the wards in which they are situated:—

Ward.	Number of Tenements. with Cisterns.			Number of Cisterns.
8—Provan	59	94
9—Cowlairs	306	553
10—Springburn	97	170
11—Townhead	10	14
17—Cowcaddens	45	85
18—Woodside	1	1
19—Ruchill	95	243
20—North Kelvin	28	52
21—Maryhill	62	111
703				1,323

In addition, there are a considerable number of cisterns in housing schemes in “pumped areas” such as Balornock, Riddrie, Ruchill, etc. These are regularly cleansed once a year by the staff of the Maintenance Section of the Housing Department.

Piggeries.—There are on the register 19 premises licensed for the keeping of swine, and the total number which the premises can accommodate is 3,960. Reports regarding the condition of piggeries were submitted to the Licensing Court. Two of them which had been in occupation for many years were so worn-out and dilapidated that renewal of the licences was refused and the premises were closed down.

Shops Act, 1934, Section 10.—The question of the heating of shops was taken up during the year and intimation of the lack of sufficient means of heating sent to the occupiers of 176 shops which were deficient in this respect. By the end of the year, means of heating had either been provided or action was being taken to meet the requirements of the Act. Gas and electric radiators were the means of heating most commonly adopted.

J. H. PATTERSON,
Divisional Sanitary Inspector.

EASTERN DIVISION.

Nuisances.—The general sanitary condition of the Division shows a steady improvement. The removal of unfit houses within the past ten years, together with the erection of new housing schemes with their children's playgrounds and open spaces have not only made a great change in the housing of the working classes but have removed a prolific source of nuisance. What are usually termed "back lands" and which were so common in the east end of the city have been reduced in number within the past decade from 265, containing 1,534 houses, to 69, with 510 houses, and if new houses were more plentiful many of those remaining would be closed or demolished.

The principal nuisances which outnumber all others are disrepair in dwelling-houses, choked drains and fittings, dirty closes and stairs, dirty walls of common passages and staircases, and rat or vermin infested premises. The latter type of nuisance is chiefly bug infestation, a problem in which the Department assists both owners and tenants of dwelling-houses to eliminate the vermin. When bugs are present behind wood facings or in the fabric of a building where a tenant cannot reasonably get access to them the practice is to make the owner or factor responsible for their removal, but if the vermin are in the tenant's furniture or bedding or behind wallpaper put on by him then the tenant is held responsible. An insecticide is supplied by the Department to any tenant whose house is bug infested, and the inspectors are willing to advise anyone as to the best eradivative methods to adopt.

There was no undue delay in the removal of the nuisances dealt with during the year and none of them call for special comment.

For a week or so the water supply in a part of Dennistoun ward was unsatisfactory and numerous complaints were received from tenants of houses who could not get an adequate supply during the day time. When the Water Engineer's attention was directed to these complaints the defect was soon remedied. Within the past few years there has been a considerable increase in the number of dietetic storage water cisterns. The increase is accounted for by the new housing schemes situated on the higher ground at Shettleston and Carntyne. Out of a total of 1,170 cisterns, 801 are in Ward 1. The inspections of these cisterns numbered 125, and 50 notices were sent to owners to have them cleansed or covered. Dietetic storage water cisterns are usually fitted in the attics of dwelling-houses situated on high ground where a scarcity of water may occur during the daytime.

An uncommon event was an application under the Cleansing of Persons Act by an unemployed man who was dissatisfied with his lodgings; before taking up other accommodation he desired to have the use of the public bath. He stated that he was bodily verminous and that he did not wish to infest his new lodgings. Arrangements were made for him to use a bath at Belvidere Wash-house and for his clothing to be disinfected.

All the dwelling-houses in the Division, with one exception, are served with water-closets. The exception is an old house which stands alone on the outskirts and which is likely to be dealt with under the Housing Acts in the near future.

The number of dwelling-houses with a separate water-closet is 24,394, being 46 per cent. of the total houses in the Division. The number of houses with a water-closet used in common by two, three, four and five or more tenants is respectively 1,142, 5,992, 1,578, and 231, equal to 54 per cent. of the total houses.

The number of houses with baths is 15,650, or 30 per cent. of the total houses, and the number of houses without an internal sink and water-supply is 68. The latter are all very old houses and are earmarked for action under the Housing Acts.

Only 159 properties are served with ashpits. The others are provided with ashbins for the collection of house refuse.

Housing.—Six houses consisting of four of four apartments, one of six apartments, and one of seven apartments were built by private enterprise. The Corporation completed 112 houses of three

and four apartments of the "Intermediate" type and another 134 of the same type are in course of erection. With regard to rehousing schemes, 174 houses of three and four apartments are in course of erection at Dalmarnock, 39 similar sized houses were completed at Landressy Street, and 30 of three, four and five apartments were completed at Haghill. Including houses in rehousing schemes in the course of erection with those which are occupied, there are 5,358. The systematic visits paid by the nurse inspectors to the houses in rehousing schemes have been maintained with satisfactory results. Generally speaking, these visits are welcomed by the great majority of the people, for the nurses not only advise in cleanly habits but are able to give advice in matters pertaining to their profession. The conditions as to cleanliness in these houses at the end of the year showed that 70.1 per cent. were clean, 29 per cent. were fairly clean, and 0.9 per cent. were unsatisfactory.

The sub-letting of houses is much the same in extent as last year. Forty-three houses, comprising 209 rooms, are sub-let to lodgers, many of whom have families. The houses are all of the larger type, situated chiefly in districts where there is difficulty in letting them to people who could maintain them without resorting to sub-letting as a means of meeting the rent. These 43 houses by no means represent all where lodgers are housed, but rather the grosser type of sub-letting. As much as 10s. and 12s. 6d. per week is known to have been charged for a room, so that the principal tenant may be said to sit rent free as well as having a substantial profit. It is possible in some instances to stop this sub-letting by calling the factor's attention to the mode of occupancy, but the outcome of such action is merely to remove the lodgers to other sub-lets. The families so housed state that they would take houses of their own if these were available, which suggests that if there were houses for these people sub-letting on the lines indicated would practically cease.

Representations in terms of Section 16 of the Housing (Scotland) Act, 1930, were made for 198 unfit houses, of which Closing Orders applied to 53 and Demolition Orders to 136 houses. Two representations involving nine houses were continued for further consideration by the Insanitary Areas Committee. As an outcome of these representations 11 properties with a total of 59 houses have been closed or demolished.

The Landressy Street Rehousing Scheme (39 houses) has been completed and all the houses are occupied. Dalmarnock Rehousing Scheme is in course of construction and when completed will provide 174 houses, and the tenants of 26 houses in Green Street Clearance Scheme have been rehoused.

The number of houses inspected under the Housing (Inspection of District) Regulations (Scotland), 1928, was 453, and of that number 80 were considered to be "in any respect unfit for human habitation" and were added to the list of unfit houses.

Three applications were made for rent certificates and two for reports in terms of the Rent (Restrictions) Acts, 1920-1923, all of which were granted.

Offensive Trades.—No new applications were made for sanction to establish any of these trades and none was removed from the Register.

By inspecting the offensive trades bi-weekly or oftener when the occasion demanded and making suggestions there has resulted an improvement in certain businesses which are the most likely to give offence. Where a boiling process forms part of the manufacture the hot vapours or effluvia if not properly treated will escape into the external atmosphere and give cause for complaints of smells. The businesses which are most likely to offend in that respect are bone-boilers, blood-boilers and tallow-melters. There are however, means by which the offensiveness of the effluvium arising from the boiling process in such places can be very considerably prevented by treatment. This treatment takes the form of condensation and chlorination in the following manner.

The effluvium is conducted through pipes from the digesters where the boiling is done to a condenser where the soluble vapour is taken up by the water and run off in a cold state to a drain, and the insoluble vapour is conducted in a similar fashion to a chlorinating tower where it is neutralised by a chlorine solution. Provided the working plant is tight in all its parts and functioning properly, escaping hot vapours should be reduced very considerably. In five of the trades in the Division where there is a boiling process condensating and chlorinating plants have been introduced and others are contemplating their adoption.

For some years it has been the practice to advocate the spraying of the raw organic material with an insecticide during the summer months to prevent the breeding of fly life, and as a result a considerable improvement in that direction has been observed. The nature of many of the offensive trades is attractive not only to flies but rats and constant steps are being taken to prevent infestations.

At the close of the year there were 44 offensive trades in the Division consisting of six bone boilers, three gut cleaners, one glue and size maker, three skimmers or hide factors, five manure manufacturers, four soap boilers, fourteen tallow melters, and eight tanners.

Rat-infested Premises.—The advice of the Department is often sought and given as to the means best suited for each circumstance to rat-proof or, where that is not practicable, to keep the vermin down as much as possible. One serious infestation was dealt with as the result of complaints. In this particular case there was a heavy infestation in a yard where large quantities of baled hay and straw were stored. On the advice of the officer wire-netting was arranged around the hay and straw and then the bales were removed with the result that 300 rats were trapped and killed within the netting. The process was repeated on two subsequent occasions when slightly less than 100 were destroyed. Other infestations of a minor character were successfully treated. The usual literature on the subject was issued during "rat week" to all owners of premises where it was known or where it was likely for rats to harbour.

Inspection of School Children.—School children suspected of being dirty or verminous to the number of 10,531 were submitted by the headmasters of the various schools to the nurse inspectors, and of these 458 were found to be dirty and 2,017 affected with head vermin, nitty hair or fleas. It is very gratifying to record that within the past few years no children have been found to be bodily affected with lice. This may be partly attributable to the better cleansing facilities in the new houses, such as hot water and baths, and partly to the system of inspection. When children are found to be verminous their homes are inspected and, if required, the necessary action is taken for their improvement.

Limewashing and Painting of Staircases, Etc.—There were issued 1,704 notices to paint and limewash or to limewash and cleanse close and staircase walls of dwelling-house properties. All the notices have been complied with.

Stair Cleaning.—While the work in connection with arranging in rotation by the tenants the sweeping and washing of closes and stairs used in common has been considerable, it has been accomplished with only two prosecutions. Rotation cards to the number of 2,036 were issued to shopkeepers and tenants of dwelling-houses showing their respective turns of this duty, and in addition 4,723 warnings were given.

Night Inspection of Houses.—By request of the Manager of the City Improvements Department 192 houses were visited during the night in various housing schemes where it was suspected lodgers were being housed in contravention of the conditions of let. In 88 houses lodgers were found and these were duly reported to the Manager.

The number of "ticketed" houses is being reduced annually as the result of slum clearance operations, and for some time these houses have not been visited during the night to discover overcrowding in view of the difficulty of overcrowded families procuring more suitable accommodation.

Common Lodging-Houses.—There are six houses for males and three for females, this being a reduction of one female's lodging-house. The reduction was the result of the building in which the house was situated being demolished. For males the collective accommodation is 1,837 beds and for females 350 beds. All the houses were inspected regularly and are well kept. There was no serious contravention of the bye-laws.

Brokers' Premises.—All the brokers who applied to the Registrar, Police Department, for licenses to carry on their businesses were reported on favourably.

Piggeries.—There are six piggeries with accommodation for 1,092 pigs. All are well kept with one exception which requires a good deal of attention in order to have it cleaned regularly and repaired when necessary.

Tents and Vans.—The parking ground at 843 Gallowgate has been well patronised by showmen. It is in charge of a caretaker whose duty it is to keep the ground clean as well as the sanitary conveniences provided for those using the ground. The average number of vans accommodated during the year was 40, with a population of 87 adults and 34 children. Two applications were made for the renewal of the permission granted in former years to use vans for human habitation. In each case it was for one van and the Local Authority renewed their permission for one year.

Cemeteries.—The principal burial grounds are the Eastern Necropolis and Dalbeth. These, together with the others, were inspected at intervals and found to be well kept, the bye-laws being observed.

Factory and Workshop Act, 1901.—There are 403 workshops and workplaces. Factory bakehouses number 43, and the number of workshop bakehouses is 66. Five bakehouses are of the underground type and all have been inspected at frequent intervals during the year. The new Factory Act which comes into force this year increases to some extent the work of the Department as, for example, amongst other duties the Local Authority will in future deal with the provision of water-closet accommodation in all factories, a duty which hitherto has been carried out by the Factory Inspector in businesses where mechanical power is used.

A. STIRLING,
Divisional Sanitary Inspector.

SOUTH-EASTERN DIVISION.

Nuisances.—The following is an example of a complaint of smells difficult to trace and requiring much investigation. Complaints have arisen in the Shawlands district involving a number of houses on the ground flats of tenements. The tenements are all of four storeys with two houses on each flat and the smells are intermittent. Although occasionally both ground-flat houses in a particular tenement are affected at the same time, more often only one is affected. Then again, in houses in tenements adjoining those affected no smells have ever been experienced, while in others some distance away the tenants have complained. The smells have also been experienced in a limited number of sewer manholes in the vicinity, but, peculiarly enough, they never seem to be carried or to travel along the sewer in either direction to other manholes.

While the smells are similar to those experienced from coal gas, the complainers generally describe them as being "like petrol." In view of this the Inspector under the Petroleum Acts investigated the possibility of leakages or escapes of petrol from garages or other premises storing petrol; he ascertained that no leakages were occurring. I also visited these and other premises in the vicinity without discovering anything that would explain the cause of the complaints. The Master of Works was asked to examine the sewers, and he later reported that these were in good order and running clear.

The matter was also reported to the Gas Department and, although an extensive examination of the gas mains in the area has been made, so far no leakage has been discovered. The drainage systems and the gas supply pipes of the properties have also been tested without result. Owing to the intermittent nature of the smells and to the fact that they were often very slight, it was difficult to obtain adequate samples of air for analysis. Eventually, however, two samples were obtained in the house of one of the complainers—one in the kitchen and the other in the bathroom. The City Analyst reported that the former sample contained 7 parts per million and the latter 10 parts per million of carbon monoxide. Owing to the small traces of carbon monoxide found in these samples the Analyst was unable to state whether these were "derived from coal gas, or from other sources, such as exhaust gas from garages, etc." A further sample of air was therefore obtained from the same house, but this time it was taken from underneath the floors, as it was from there that the smells were obviously coming. The result of the analysis of this sample showed that it contained 13 parts of carbon monoxide per million—a figure still too small to enable the Analyst to express a definite opinion as to the source. On communicating with the Analyst and explaining to him the relative position of the nearest garage to the house from which the samples were taken, the fact that the area was a residential one with very intermittent motor traffic on the streets, and that the smells were obviously coming from below ground under the complainers' houses, he agreed that exhaust gases from motor cars could not be the cause. Meantime the Gas Department's Officers were continuing their investigations, with negative results.

It was then decided to endeavour to obtain samples of air when the smells were more concentrated, with a view to ascertaining if this indicated a higher proportion of carbon monoxide. This, of course, was somewhat difficult as it depended so much on the individual's sensitiveness to smells. After some days of intensive observations it was found that the smells appeared to be much stronger than usual in one of the sewer manholes. Enquiries revealed that at the same time smells were also being experienced fairly strongly in the house of one of the complainers, although this was not the house from which the former samples of air had been obtained. A sample of air was then taken in the sewer manhole and also in the house in which the smells were being experienced. For the purposes of comparison, samples were also taken in the house immediately above that referred to, from the middle of the carriageway immediately outside, and from a shop directly across the street. As the manhole from which the sample of air was taken was at the end of the sewer and no sewage therefore flowed through it, samples of sewage were taken at two manholes further along the sewer, with a view to ascertaining if the smells were arising from the sewage. The results of the analysis of these samples are of considerable interest, and are as follows:—

Sample of air taken from sewer manhole—Carbon monoxide, 456 parts per million.

Analyst's note.—"Having regard to the very high concentration of carbon monoxide in this sample and also the locus from which the sample was taken, I am of opinion that the probability is so great as to amount to almost a certainty that this carbon monoxide is derived from coal gas. No evidence could be obtained of petrol vapour in the sample."

Sample of air taken in a complainer's house—Carbon monoxide, 19 parts per million.

Sample of air taken in house immediately above complainer's house—Carbon monoxide, trace.

Sample of air taken in carriageway—Carbon monoxide, nil.

Sample of air taken in shop across the street—Carbon monoxide, nil.

With regard to the two samples of sewage, the Analyst reported that "these samples were carefully tested for the presence of carbon monoxide, with entirely negative results."

Investigations in the matter are still being continued.

Housing.—One hundred and sixty-seven houses were represented as being uninhabitable. Demolition Orders were made on 61 of these and Closing Orders on 39. The remaining 67 houses are still under consideration. Of the 61 houses on which Demolition Orders have been made, 19 have now been demolished and 23 have been closed and are awaiting demolition. The tenants of the remaining

19 houses have not yet been rehoused. Of the 39 houses on which Closing Orders have been made, 19 have been demolished voluntarily by the owners, 18 have been closed, and the remaining 2 are still occupied. Twenty houses on which a Demolition Order had previously been made were demolished during the year, and a further 20, which were on the departmental list of unfit houses, were closed or demolished at the instance of the Master of Works or voluntarily by the owners.

Inspection of District Regulations.—One hundred and fourteen houses were inspected during the year and were found to be reasonably fit for human habitation. Since 1931, a total of 4,915 houses have been inspected under these Regulations, 3,296 of which were found to be uninhabitable. Of the latter, 1,261 have already been dealt with under the Housing Acts by way of Demolition Orders or otherwise.

Overcrowding.—One hundred and ninety-three families were rehoused by the Local Authority during the year—42 from houses of one apartment, 105 from houses of two apartments and 46 from houses of three apartments.

Of the 42 houses of one apartment thus decrowded, 9 have again become overcrowded although to a reduced extent. Fifteen of the 105 houses of two apartments have also again become overcrowded—12 to a lesser degree, 1 to the same degree, and 2 to a greater degree. In only 2 of the 46 three-apartment houses did overcrowding recur and this to a lesser extent.

Reconstruction of Houses.—At 99 South Portland Street a house of six apartments has been divided into two houses of two and three apartments respectively with modern bathrooms. At 48 Abbotsford Place seven houses, and at 48 Cumberland Street six houses, all of five apartments, have been converted into houses of four apartments, one of the bedrooms in each house being fitted up as a modern bathroom. At 1 Queen's Park Avenue a house of six apartments with bathroom has been divided into two houses of two and four apartments, a portion of the kitchen being partitioned off and fitted up as a bathroom for the two apartment house.

New Houses.—One hundred and five houses—16 of three apartments, 46 of four apartments, and 43 of five apartments—built by the Corporation, were occupied for the first time during the year

In addition, 70 houses—8 of three apartments, 17 of four apartments, and 45 of five or more apartments—built by private enterprise, were also occupied.

Rent (Restrictions) Acts.—Three applications for certificates that houses were not in a reasonable state of repair were received. One was granted and two were refused.

Sanitary Conveniences.—There has been a further reduction in the number of water-closets used in common by two or more tenants. The figure is now 5,359, and of these 1,035 serve two tenants, 3,016 serve three tenants, 1,087 serve four tenants, and 221 serve five or more tenants. There are still 11 pan privies and 3 privy middens in outlying districts. Of the former, 8 serve one tenant, 1 serves two tenants, 1 serves three tenants, and 1 serves four tenants. Of the latter, 1 serves one tenant, 1 serves two tenants, and 1 serves five tenants. Forty-four houses of one apartment and 18 houses of two apartments are without inside sinks or water supply, and the number of houses with baths is approximately 25,870. There has been a reduction of 10 common ashpits which now number 140—3 serving two tenants, 2 serving three tenants, 4 serving four tenants and 131 serving five or more tenants.

Water Supply.—Complaints of sediment and discoloration in the water supply to a dwelling-house were received and on investigation it was found that the main water pipe terminated just beyond the complainer's house so that there was not a circulation of water and sediment accumulated at the end of the pipe. On the attention of the Water Department being drawn to the matter, the water main was extended and connected to another main in an adjoining street and all cause for complaint was thus removed.

Five hundred and sixty-six inspections were made of water-storage cisterns and 365 were found to be in a dirty condition or inadequately covered. On the owners being notified, the necessary cleansing and repairs were carried out. Eighty-two defective supply pipes which prevented tenants from having an adequate supply of water were repaired and the Water Engineer was notified of water running to waste because of defective taps or pipes at 323 properties.

Drainage.—One thousand, eight hundred and sixteen inspections were made of new drainage systems and of alterations to existing systems and the smoke test was applied on 459 occasions. In

addition there were many consultations with architects and builders regarding the proper lay-out and construction of the drains. The largest installations were at Croftfoot School and janitor's house with 26 water-closets, 1 urinal, 34 wash-hand basins, 7 sinks, 1 bath, 1 tub and 2 drinking fountains; Florence Street Clinic and caretaker's house with 22 water-closets, 30 wash-hand basins, 27 sinks, 4 baths, 1 tub, 2 foot-baths, and 2 dental units; the State Picture House with 9 water-closets, 5 urinals, 4 wash-hand basins, and 2 sinks; Corporation Printing Department with 11 water-closets, 7 urinals, 10 wash-hand basins, and 5 sinks; and Hampden Park (Queen's Park Football Ground) with 23 water-closets, 16 urinals, 6 wash-hand basins, and 3 sinks.

Cleansing.—Disputes among tenants regarding the regular rotation of close and stair cleaning are still numerous and entail a considerable amount of work; 3,421 tenants were warned for neglecting their duty in this matter and, in addition, 2,038 rotation cards fixing the tenants' turns had to be served. There were 14,035 visits paid to ensure that the regulations were being complied with. In two cases it was necessary to institute Court proceedings and in both a fine of 7s. 6d. was imposed.

Many tenants still require close supervision to get them to maintain a reasonable standard of cleanliness in their houses, 193 being dealt with during the year. In only one case, that of a man living alone and who was seldom sober when the inspectors called, was it necessary to take Court action. Before the case could be brought before the Court, however, the man had become so ill owing to his intemperate habits that he had to be removed to hospital. Proceedings were consequently withdrawn and the house was subsequently cleaned and re-let to another tenant.

The limewashing or painting of 780 common closes and staircases was carried out by the owners at the request of the Department.

Rehousing Schemes.—There is now a total of 919 houses in the Division, 15 new houses having been added to the Govanhill Scheme during the year. Ten tenants were evicted during the year for non-payment of rent, 40 removed for private reasons, 5 houses were unoccupied at the beginning of the year, and 15 new houses were built. There were thus 70 houses to be occupied or re-occupied

during the year. In only 58 of these did new tenants enter into occupancy, however, so that 12 houses were still vacant at the end of the year. Of the 907 occupied houses, 831 were kept in a clean condition, 73 were kept fairly clean, and 3 were dirty.

Common Lodging-Houses.—The two common lodging-houses were kept under regular supervision and were found to be clean and properly supervised.

Shops Act, 1934.—Five hundred and sixty-six visits were paid to shops to ascertain what progress is being made with the provision of means for maintaining a reasonable temperature. In a number of cases some form of heating had already been, or was in course of being installed. In 49 shops where no action was being taken letters were sent to the occupiers drawing their attention to the terms of the Act and requesting that suitable and sufficient means to maintain a reasonable temperature be provided. In most of these cases replies have been received that the matter is having attention.

Workshops, Etc.—There are 515 registered workshops and workplaces in the Division and of these 2,827 inspections were made during the year. Sixty-seven were found to require limewashing or cleansing and this work was subsequently carried out on the occupiers' attention being drawn to the matter. Other defects and minor nuisances to the number of 98 were also remedied.

Bakehouses.—Bakehouses number 147 and to these 1,058 visits of inspection were paid. Thirty-two required to be limewashed or cleansed, and at 44 others minor nuisances were discovered. These matters were at once rectified.

Homeworkers.—Two hundred and twenty-two visits were paid to homeworkers, of whom there are 53 on the Register. The homes were clean and free from infectious disease.

Licensed Brokers.—All brokers' premises must be approved of by this Department before a licence is granted. In only one case was it necessary to recommend the refusal of a licence owing to the unsuitability of the premises. There are now 18 licensed brokers' premises in the Division.

Cemeteries.—Twenty-four inspections of cemeteries were made, the grounds on all occasions being found satisfactory. Interments in Old Cathcart Churchyard are now comparatively few, being restricted to the families of lair holders. Although the ground has not been officially closed the approval of this Department is always obtained before an interment is permitted. Only one interment took place during the year.

DUNCAN THOMSON,
Divisional Sanitary Inspector.

SOUTH-WESTERN DIVISION.

The demolition of five tenements in Orkney Street in one of Govan's black spots was an outstanding feature of the year. This will make for an improvement envisaged for many years. Opportunity was taken during the year to re-survey a group of 3,269 houses found overcrowded at the general survey in 1935 of overcrowding in the city, and the results of the enquiry are given later in this Report. Another important matter discussed is the recent conversion of a few large houses in a residential district into what are virtually farmed-out houses. Attention is also drawn to the present practice of showing in the Valuation Roll the rooms occupied in service flats as separate dwelling-houses.

Drainage is satisfactory, and all tenement property has water-closet accommodation. Only two houses in the Division are without an internal sink and water supply.

The Empire Exhibition which is in process of completion has entailed a considerable amount of extra work, particularly in connection with the inspection and testing of drainage and sanitary fittings. Details of routine work will be found in the Appendix (Table XXIII.).

Nuisances.—Nuisances, which show a decrease on last year, are set out in detail in the Appendix. They were as a rule readily attended to, but in one case where a house factor failed to repair broken panes of glass in the windows of a dwelling-house it was necessary to take action in the Sheriff Court. The circumstances in this case are somewhat unusual, as will be seen from the Sheriff's Note, which is in the following terms:—

“The windows of this house are considerably broken and have a number of holes in different panes caused apparently by stones thrown from outside. The defender is the landlord of the house, which is let on a monthly tenancy, and as such is liable under the Act for structural defects such as this.

"The main defence is that the defects do not fall under the terms of the Act. For the pursuer it is alleged that these conditions are a nuisance and are potentially dangerous to health. The danger is that the condition of the windows creates draughts which may affect the health of the people living in the house. I accept the interpretation of the phrases in question given in Skelton's Public Health Manual at p. 257 in respect that a nuisance may be such though not dangerous to health and that danger to health need only be potential. The evidence for the pursuer, given by medical and sanitary experts, was perfectly definite that the existing condition was a danger to health and that it caused a decided degree of discomfort. The draughts caused by such broken windows were not commensurate to, in fact, were the antithesis of, proper methods of ventilation. This evidence was not seriously shaken in cross-examination. No doubt the question of how much injury to the windows creates a danger to health is a question of degree, but the opinion of all the witnesses was that the circumstances here over-passed that point. Their evidence was uncontradicted as the defender did not lead any evidence. It was suggested that I was entitled to use my own knowledge and over-rule their opinion. In the absence of contradictory evidence and as their view appears reasonable, I think the question is scarcely open in this case. It is suggested that paper pasted over the holes would cure the draughts. This would be a purely temporary measure, and in any event the defender, who is the person responsible, did nothing of this kind. No doubt a good many tenants of houses of this type have mended their windows this way, but in the face of the evidence in this particular case, I am not entitled to consider their actings. I am not attempting to lay down any general rule. Each case must be judged on its own facts.

"Again, I am not deciding any question as to the rights of the landlord to obtain repayment of the expense of the repair from the tenant under the missive of let. It is not disputed that the landlord is the party responsible in a complaint by the local authority."

The nuisance was removed by the defender, who was found liable in expenses.

Complaints were received regarding the emission of dust from the Refuse Power Works, Govan. Plant for the extraction of the fine dust from the refuse was installed at a cost of £2,520, and was in full working order in the last week of the year.

Common Lodging-houses.—There are again six common lodging-houses on the Register. Apart from a few minor breaches of the bye-laws which were duly attended to, there were no grounds for complaint.

Houses Let in Lodgings.—Twenty-nine houses of from three to seven apartments were registered during 1937, bringing the total to 51 at the end of the year. The tenants of the newly registered houses came in many cases from similar dwellings, while others were previously in lodgings. It would appear that they find it less difficult to take over a fairly large size of house and sub-let the individual apartments than to rent a smaller house of one or two apartments. As a rule, only one of the apartments is set aside for the use of the tenant's own family. The lodger families for

the most part came from other lodgings in the city or from houses vacated because of rent arrears, but others came from localities outwith the city as far apart as Castle Douglas and Fort William. One family came from Northern Ireland and another from Canada.

The weekly charges range from 3s. 9d. to 10s. for an unfurnished room, and 10s. to 15s. for a furnished apartment. Rooms occupied by single women lodgers are let at from 5s. to 6s. weekly, and similar charges are made for male lodgers.

A total of 369 day inspections were made to enforce the by-laws. Warnings regarding the lack of cleanliness were given in a few cases and received immediate attention. In addition, 34 night inspections were made with regard to overcrowding, and as a result slight alterations in family accommodation were effected in some cases.

Farmed-out Houses.—Farming-out was discovered in seven separate houses varying in size from three to seven apartments in one of the older parts of the Division. The house factors were notified that the conditions in the houses were such as to warrant their being declared farmed-out houses, whereupon in six instances they took legal proceedings to have the leases cancelled and the houses vacated. One case was outstanding at the end of the year.

A disquieting feature has been the spread of sub-letting to large houses situated in a residential district. These houses, sub-let as service flats, are virtually farmed-out houses, and the following details regarding one such house will serve to illustrate their undesirable nature, both from the sanitary and housing points of view.

The house referred to is of ten apartments, and is one of six houses, with rents of from £40 to £55 a year, forming a three-storey-and-attic tenement. There are five apartments, including the kitchen, on the main flat, and five apartments on the attic flat which is reached by an inside stair.

The particulars of occupancy of the various apartments of the house are as follows :—

Main Flat—

Apartment, 1st Left—

Husband and wife. Sub-let unfurnished at 10s. 6d. per week.

Apartment, 2nd Left—

Husband and wife. Sub-let unfurnished at 11s. 6d. per week.

Apartment, 3rd Left—

Husband and wife and one child, 3 years. Sub-let unfurnished at 12s. 6d. per week.

Apartment, 4th Left—

Husband, wife and two children, 2 and 3 years. This is the caretaker who occupies the room rent free.

Apartment, 5th Left—

Widow. Sub-let unfurnished at 10s. 6d. per week.

*Attic Flat—**Apartment, 1st Left—*

Sub-let to caretaker. Rent 4s. per week.

Apartment, 2nd Left—

Husband and wife. Sub-let unfurnished at 9s. per week.

Apartment, 3rd Left—

Single man. Sub-let furnished at 7s. 6d. per week.

Apartment, 4th Left and Apartment, 5th Left—

Widow and grown-up son. Sub-let together, unfurnished, at 11s. per week.

Each sub-tenant is held responsible for the cleanliness of the floor, bedding, &c., in the individual apartments, and the caretaker is responsible for keeping clean the remainder of the house and for any limewashing, &c., required.

Water Supply.—There is a sink in the kitchen for the exclusive use of the caretaker and his family. The water for the remaining tenants on the main flat is obtained from a wash-hand basin and bath. The supply of water for the tenants on the attic flat is from a sink situated in a press.

Water-Closet Accommodation.—There are two water-closets provided—one on each flat.

Facilities for Cooking.—On the main flat a gas ring is provided in each of the sub-tenants' rooms, and on the attic flat there is a gas cooker in a press on the landing for all the tenants on this flat.

Facilities for Washing Dishes, &c.—Washing of dishes, &c., is carried out in the sub-tenants' rooms.

There are no facilities for drying clothes and no provision for the storage of coal.

There are six houses in the same locality in which the conditions are more or less similar. They are all receiving the active attention of the Department, and while the matter had not been disposed of it was well in hand at the end of the year, and a satisfactory solution is in sight.

A matter of some general importance with regard to service flats is that there is a tendency at the present time to record in the Valuation Roll each service room as a separate house. This practice is to be deprecated as from the statistical point of view it shows a fictitious increase in the number of one and two apartment houses in the city.

New Houses.—New houses numbered 481, compared with 431 in the previous year and 768 in 1935. Those erected by private enterprise, of which there were 96, as against 129 in 1936 and 68 in 1935, were bungalows and semi-detached villas, situated chiefly at Hillington, Hurlet and Titwood. The Corporation erected 385 houses, as compared with 302 and 700 respectively in each of the two immediately preceding years. One hundred and twenty-three houses comprising the Dunsmuir Street Scheme were for re-housing; 76 were for the relief of overcrowding; and 186 for ordinary housing.

Sub-divided and Modernised Houses.—Six houses, each of five apartments, in one tenement were converted into nine houses of three apartments each, with the usual modern amenities, as compared with 11 modernised houses accruing from seven out-of-date houses in the previous year, and 15 from 13 in 1935.

Houses Closed and/or Demolished under the Housing Acts.—At the end of 1936 the houses in four front lands in Francis Street, except one which was then occupied, had been closed and awaited demolition, and early this year that house was vacated, whereupon the 38 houses concerned were demolished and the sites cleared.

At the Orkney Street area five tenements of 127 houses were closed and demolished and the sites cleared, and 40 houses were closed in other two tenements, also in Orkney Street, which will be demolished immediately the remaining ten occupied houses are vacated.

Houses Closed and/or Demolished to allow of Business or Other Extensions.—Forty-two controlled houses of one, two, three, four and five apartments forming parts of 11 tenements belonging to one firm were closed by mutual arrangement between the tenants and the owner in preparation for the ultimate demolition of the tenements and the utilisation of the sites for business extensions. Last year the same firm similarly arranged for the removal of the families in 38 houses of two and three apartments in six tenements belonging to them and since demolished. It is a striking fact that of the 80 families so displaced over a period of two years only one was rehoused in a Corporation house, the others finding alternative accommodation elsewhere. It is to be remembered, however, that the houses vacated were in good working class tenements, which, while they did not have all the amenities of the modern house, were by no means out of date; that the good offices of house factors were enlisted on behalf of the outgoing tenants; and that there was practically no time limit to the search for the necessary alternative accommodation. Two self-contained houses were demolished to make way for a school extension. An old two-storey tenement of eight houses, which were closed by the owners in 1936, was demolished and the site cleared for a business extension; and four houses were closed in a tenement, which is about to be taken down to allow of road widening.

Re-housing Schemes.—Dunsmuir Street Re-housing Scheme, consisting of 123 houses of three and four apartments, was opened during the year. Most of the tenants came from near-by condemned houses in Orkney Street. The houses in this and in the other three schemes, viz.:—Whitefield Road, Broomloan Road and Teucharhill, containing 1,075 houses in all, were regularly and frequently inspected and found to be pretty much the same as in previous years. Bug infestation occurred in a few houses, necessitating action either by the tenants or the City Improvements Department. The generally high standard of cleanliness of former years was maintained. Forty-eight cases of sub-letting were discovered and reported to the City Improvements Department; by the end of the year all the lodger families were removed. While the cleansing of the common closes and stairs in rotation by the tenants was carried out regularly as a rule, 11 defaulting tenants were prosecuted in the Police Court and fined for neglecting the mid-week washing of the stairs. The usual defects of wear and tear incidental to property of this kind, including a large number of broken panes of staircase windows, were reported to and duly attended to by the City Improvements Department.

Rag Flock Acts.—Three samples submitted for analysis were satisfactory. In the two cases in which legal proceedings were instituted in 1936, and which were not disposed of at the end of that year, one offender was fined £1, and the other relied on a warranty defence which was upheld. The subsequent action against the wholesaler for giving a false warranty was found not proven.

Shops Acts.—Under the 1934 Act, 619 inspections were made of shops, in two of which water-closet accommodation was installed and in 54 heating facilities were provided or improved.

Sanitary Conveniences used in Common.—Such changes as occurred were largely due to slum clearance. Water-closets serving two, three, four and five or more tenants numbered 1,066, 1,831, 1,084 and 284 respectively, a total of 4,265, as compared with 4,288 in the previous year, a total reduction of 23. Dry privies and privy middens again numbered four and two respectively. Ashpits used in common show a decrease of 69 per cent., the number serving five or more tenants being 408, a reduction of 908, compared with reductions of five and 145 respectively in 1935 and 1936. Houses without an inside sink and water supply again number two, at which figure they have remained for several years.

Rat Destruction.—Rat Week, observed as formerly in April, added a fillip to the enforcement of the measures taken throughout the year for the destruction of the rodents. Complaints, usually of slight infestation, were again numerous, and were satisfactorily dealt with.

Burial Grounds.—The three cemeteries, in one of which there is common ground, were found satisfactory on the several occasions on which they were visited.

OVERCROWDING.

The general survey of overcrowding in the city carried out during 1935 included 37,494 houses of four apartments or under in the South-Western Division. Overcrowding was discovered in 12,142 (32 per cent.): the statutory standard of occupancy in 6,005 houses was exceeded by more than one adult. An opportunity was taken during 1937 to re-survey 3,269 of this seriously overcrowded group, all of which are privately owned, in order to ascertain the changes which had taken place since the previous survey. At the same time the floor area of the rooms was measured and enquiry was made regarding certain other matters of general interest. It should be pointed out that apart from being seriously overcrowded in 1935, the houses were not specially selected. They were average houses as regards design, structure, etc., and were made up of 417 houses of one apartment, 2,359 of two apartments, 476 of three apartments, and 17 of four apartments.

Changes in Interval between Surveys.—As would be expected, a certain number of the houses had changed hands in the interval between the two surveys. The 3,269 houses under consideration, therefore, sort themselves into two groups—those occupied by the same families at both surveys, and those in which changes of tenancy had taken place. These two groups may be dealt with separately.

Houses with No Change in Tenancy.—The houses in this group numbered 2,763, or 85 per cent. of the total re-surveyed. The changes as regards overcrowding which had taken place in the two years since 1935 are shown in the following statement:—

Number of Houses	...	...	2,763	
Overcrowding abated	...	...	111	4.01 per cent.
Overcrowding reduced	...	...	786	28.45 per cent.
Unchanged	...	...	972	35.18 per cent.
Increased	...	...	894	32.36 per cent.

Overcrowding was abated or reduced in approximately one-third of the houses, while in a similar proportion the degree of overcrowding was increased. The increases or decreases ranged from $\frac{1}{2}$ to 4 adults, but generally speaking the degree was small in those houses showing an increase. Multiple occupancies were found in 36 (1.3 per cent.) of the houses, and lodgers in 25 or 0.9 per cent.

Houses with Changes in Tenancy.—A total of 506 houses fall into this group. At the 1935 survey all of these houses were seriously overcrowded, the degree of overcrowding ranging from $1\frac{1}{2}$ to 7 adults. When re-surveyed during the present year it was found that in most cases overcrowding had been abated, while in a considerable proportion of the remainder a reduction in the degree of overcrowding had been effected. The position at the two surveys appears in the following table:—

Excess (Adults)		0	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	$5\frac{1}{2}$	6	$6\frac{1}{2}$	7
1935	...	—	—	—	26	198	74	99	27	31	19	15	9	4	1	3
1937	...	368	45	46	15	13	4	7	5	1	1	1	—	—	—	—

Overcrowding was abated in 368 houses or 72 per cent., while in a further 91 houses, or 17 per cent., it was reduced to not more than one adult. It is of interest to note that 235 of the decrowded houses were occupied below maximum capacity. Multiple occupancies were found in three cases (0.6 per cent.) while a lodger was kept in only one house.

Applications for Corporation Houses.—Enquiry during the survey showed that of the tenants who were resident in the houses at both surveys, more than half had on at least one occasion made application for a Corporation house. An offer of such a house had been made in 376 cases but was refused. Three main reasons were given for the non-acceptance of the new house, viz.:—(1) rents were too high—this reason was given in 59 per cent. of the cases; (2) house was too far from place of employment—22 per cent.; and (3) unemployment at the time of offer—14 per cent. Among the other reasons given for refusal were dislike of the locality of the house offered; the house was not a main door house; while one tenant refused a Corporation house because it overlooked a cemetery, and another because it was too close to a refuse destructor.

Almost six per cent. of the tenants of the houses surveyed had at some time occupied a Corporation house. The main reason for leaving in the majority of cases was that the rents were too high.

Other reasons included unemployment, distance from place of employment, arrears of rent, and, in some cases that houses had become too large for the needs of diminishing families.

Cleanliness.—As regards cleanliness, it was found that of the total houses surveyed 97 per cent. were clean, while three per cent. were regarded as only fair or unsatisfactory.

Measurement of Floor Area.—The rooms of all the houses surveyed were measured in accordance with the Housing (Computation of Floor Area) Regulations (Scotland), 1935, with the following result:—

110 sq. ft. or more	...	...	...	...	88.45 per cent.
90 sq. ft. or more, but less than 110 sq. ft.					8.29 "
70 sq. ft. or more, but less than 90 sq. ft.	...				2.10 "
50 sq. ft. or more, but less than 70 sq. ft.	...				1.04 "
Under 50 sq. ft.	...	...	...	...	0.12 "

Actually in only a comparatively small percentage of the houses was an alteration in the permitted number of persons affected by measurement.

The following table shows the average floor areas of rooms and of houses, the actual floor areas of the smallest and largest rooms and houses, and the number of houses with one or more rooms of less than 110 sq. ft., classified according to the size of the house.

Room, &c.	1	2	3	4
	apartment.	apartments.	apartments.	apartments.
<i>Average Floor Area—</i>	sq. ft.	sq. ft.	sq. ft.	sq. ft.
Kitchens	136	126	127	132
Rooms (other than kitchens) ...	—	138	141	140
Houses	136	264	410	551

Actual Floor Area—

Smallest room	95	43	46	61
Largest room	239	288	288	249
Smallest house	95	149	269	409
Largest house	239	460	694	704

Houses with one or more rooms of less than 110 sq. ft.

	No.	No.	No.	No.
With one room	29	404	163	6
With two rooms	—	52	25	3
With three rooms	—	—	1	1

JAMES REID,
Divisional Sanitary Inspector.

APPENDIX.

TABLE I.—GLASGOW, 1937—ESTIMATED POPULATION IN EACH MUNICIPAL WARD, ACREAGE, AND PERSONS PER ACRE.

MUNICIPAL WARDS.	POPULATION.				Acreage.	Persons per acre (incl. Institutions and Shipping)
	Without Institutions and Shipping.	Institutions.	Shipping.	Total.		
1. Shettleston and Tollcross ...	48,221	120	—	48,341	1,061	46
2. Parkhead ...	40,789	1,160	—	41,949	883	47
3. Dalarnock ...	31,374	16	—	31,390	288	109
4. Calton ...	25,227	1,868	—	27,095	333	81
5. Mile-end ...	19,441	—	—	19,441	191	102
6. Whitevale ...	20,705	242	—	20,947	176	119
7. Dennistoun ...	26,589	363	—	26,952	280	96
8. Provan ...	44,744	982	—	45,726	1,293	35
9. Cowlares ...	21,515	1,088	—	22,603	456	50
10. Springburn ...	22,857	3,185	—	26,042	2,748	9
11. Townhead ...	24,972	1,743	—	26,715	175	153
12. Exchange ...	12,943	2,096	7	15,046	289	52
13. Blythswood ...	9,910	2,220	11	12,141	242	50
14. Anderston ...	23,383	1,021	806	25,210	422	60
15. Sandyford ...	17,986	444	—	18,430	152	121
16. Park ...	21,194	210	—	21,404	272	79
17. Cowcaddens ...	32,882	740	1	33,623	488	69
18. Woodside ...	31,176	871	—	32,047	170	188
19. Ruchill ...	51,674	1,241	2	52,917	1,766	30
20. North Kelvin ...	20,555	80	—	20,635	146	141
21. Maryhill ...	27,455	976	4	28,435	1,391	20
22. Kelvinside ...	25,481	954	—	26,435	1,127	23
23. Partick (East) ...	26,349	1,095	—	27,444	268	102
24. „ (West) ...	22,744	51	123	22,918	357	64
25. Whiteinch ...	32,500	713	13	33,226	1,266	26
26. Hutchesontown ...	36,813	19	—	36,832	389	95
27. Gorbals ...	42,279	592	—	42,871	252	170
28. Kingston ...	27,623	178	163	27,964	285	98
29. Kinning Park ...	33,825	391	245	34,461	379	91
30. Govan ...	37,565	408	—	37,973	529	72
31. Fairfield ...	32,833	2,148	104	35,085	1,402	25
32. Pollokshields ...	40,357	1,848	—	42,205	4,678	9
33. Camphill ...	18,520	42	—	18,562	366	51
34. Pollokshaws ...	24,765	—	—	34,765	1,847	13
35. Govanhill ...	31,203	260	—	31,463	365	86
36. Langside ...	18,258	875	—	19,133	557	34
37. Cathcart ...	31,365	50	—	31,415	1,327	24
38. Yoker and Knightswood ...	29,891	131	—	30,022	1,430	20
CITY ...	1,087,963	30,421	1,479	1,119,863	30,046	37

TABLE II.—GLASGOW, 1937.—INHABITED AND UNOCCUPIED HOUSES
IN EACH MUNICIPAL WARD.

MUNICIPAL WARDS.	INHABITED HOUSES*				Empty Houses.
	1937.	1936.	Decrease.	Increase.	
1. Shettleston and Tollcross	11,440	11,333	—	107	10
2. Parkhead	9,913	9,792	—	121	10
3. Dalrnarnock	8,016	8,125	109	—	12
4. Calton	6,131	6,232	101	—	27
5. Mile-end	4,843	4,876	33	—	5
6. Whitevale	5,290	5,306	16	—	4
7. Dennistoun	6,972	6,970	—	2	21
8. Provan	11,146	10,770	—	376	22
9. Cowlairs	5,955	5,648	—	307	1
10. Springburn	5,555	5,552	—	3	6
11. Townhead	6,069	6,000	—	69	64
12. Exchange	3,307	3,421	114	—	32
13. Blythswood	2,351	2,445	94	—	41
14. Anderston	5,825	5,788	—	37	32
15. Sandyford	4,168	4,170	2	—	62
16. Park	5,415	5,208	—	207	107
17. Cowcaddens	8,191	8,240	49	—	4
18. Woodside	8,396	8,236	—	160	40
19. Ruchill	11,702	11,354	—	348	9
20. North Kelvin	5,852	5,796	—	56	82
21. Maryhill	6,839	6,832	—	7	14
22. Kelvinside	7,694	7,439	—	255	229
23. Partick (East)	6,732	6,754	22	—	39
24. „ (West)	6,475	6,544	69	—	18
25. Whiteinch	8,522	8,365	—	157	52
26. Hutchesontown	9,653	9,610	—	43	5
27. Gorbals	9,797	9,786	—	11	47
28. Kingston	6,401	6,431	30	—	56
29. Kinning Park	8,426	8,410	—	16	15
30. Govan	8,912	8,938	26	—	9
31. Fairfield	8,179	8,174	—	5	4
32. Pollokshields	10,868	10,360	—	508	128
33. Camphill	5,767	5,737	—	30	32
34. Pollokshaws	6,494	6,479	—	15	16
35. Govanhill	8,403	8,388	—	15	9
36. Langside	5,198	5,168	—	30	37
37. Cathcart	9,192	9,149	—	43	37
38. Yoker and Knightswood	7,637	7,612	—	25	10
CITY	277,726	275,438	—	2,288	1,348

* Includes Inhabitant Occupiers.

TABLE III.—GLASGOW.—LININGS GRANTED BY DEAN OF GUILD COURT IN YEARS FROM 1919 TO 1937 IN RESPECT OF HOUSES.

Year ending 31st August.	NUMBER OF APARTMENTS.						TOTAL.
	1.	2.	3.	4.	5.	6.	
1919 ...	—	—	144	78	—	—	222
1920 ...	—	12	1,239	414	214	57	1,936
1921 ...	—	—	1,176	981	240	34	2,431
1922 ...	—	—	65	99	39	31	234
1923 ...	—	680	286	205	104	46	1,321
1924 ...	—	357	991	605	745	82	2,780
1925 ...	—	504	674	111	44	61	1,394
1926 ...	—	318	4,649	967	769	93	6,796
1927 ...	—	228	2,889	1,209	802	55	5,183
1928 ...	—	132	4,184	2,238	314	17	6,885
1929 ...	—	570	1,656	1,024	124	82	3,456
1930 ...	—	506	1,958	1,295	230	202	4,191
1931 ...	—	122	2,220	1,900	38	26	4,306
1932 ...	33	529	3,464	1,251	70	4	5,351
1933 ...	—	270	1,845	3,162	337	23	5,637
1934 ...	34	603	1,825	787	80	52	3,381
1935 ...	—	220	2,082	792	128	9	3,231
1936 ...	—	—	1,462	1,320	290	12	3,084
1937 ...	—	2	687	847	301	34	1,871

TABLE IV.—ABSTRACT OF METEOROLOGICAL OBSERVATIONS TAKEN AT SPRINGBURN PUBLIC PARK.

MONTHS.	TEMPERATURE.			RAINFALL.		SUNSHINE. Hours.
	Highest Temp. in Shade.	Lowest Temp. in Shade.	Mean Temp.	No. of Days.	Amount Collected in inches.	
1937.						
January ...	53	28	39·5	24	3·53	21·0
February ...	51	26	37·9	25	4·40	79·2
March ...	50	23	36·6	15	1·07	89·8
April ...	66	31	46·9	16	1·92	66·2
May ...	70	37	52·9	15	2·16	191·3
June ...	74	37	56·2	16	3·28	203·3
July ...	77	44	58·6	17	3·16	127·2
August ...	80	43	59·5	15	3·50	150·0
September ...	69	37	53·4	21	2·40	107·8
October ...	64	31	47·0	19	3·80	59·8
November ...	57	25	40·8	14	·45	54·8
December ...	52	15	34·7	15	1·99	32·1
1926 ...	86	22	47·7	242	45·91	1,174
1927 ...	77	20	46·8	245	49·12	1,162
1928 ...	79	20	46·8	255	49·35	1,121
1929 ...	80	14	46·3	226	43·01	1,223
1930 ...	79	20	47·7	234	42·94	1,022
1931 ...	73	19	46·5	251	43·06	1,078
1932 ...	83	25	47·3	223	42·98	1,126
1933 ...	87	20	48·4	203	29·17	1,255
1934 ...	86	24	48·5	248	39·98	1,186
1935 ...	80	15	47·2	230	43·44	1,211
1936 ...	80	17	47·2	230	40·85	1,076
1937 ...	80	15	47·0	212	31·66	1,183

TABLE V.—GLASGOW.—BIRTHS AND BIRTH-RATES *per Million* IN EACH WARD FOR THE YEAR 1937, AND NUMBER AND PERCENTAGE OF ILLEGITIMATE BIRTHS

MUNICIPAL WARDS.	Births. 1937.	Birth- rate. 1937.	Birth- rate. 1936.	Illegitimate Births.	
				No.	% Total Births.
1. Shettleston and Tollcross ...	999	20,717	20,978	41	5.9
2. Parkhead	861	21,109	22,100	42	4.9
3. Dalmarnock	796	25,371	26,706	31	3.9
4. Calton	608	24,101	24,525	45	7.4
5. Mile-end	518	26,645	28,075	18	3.5
6. Whitevale	504	24,342	23,113	16	3.2
7. Dennistoun	396	14,893	13,820	18	4.5
8. Provan	1,097	24,517	22,272	46	4.2
9. Cowlairs	447	20,776	19,346	20	4.5
10. Springburn	434	18,988	18,138	31	7.1
11. Townhead	572	22,906	22,815	55	9.6
12. Exchange	339	26,192	27,142	41	12.1
13. Blythswood	219	22,099	19,485	39	17.8
14. Anderston	588	25,146	24,958	45	7.7
15. Sandyford	376	20,905	19,052	36	9.6
16. Park	264	12,456	11,197	38	14.4
17. Cowcaddens	859	26,124	28,488	49	5.7
18. Woodside	763	24,474	27,354	64	8.9
19. Ruchill	1,019	19,720	18,541	56	5.5
20. North Kelvin	407	19,801	18,332	16	3.9
21. Maryhill	570	20,761	20,609	28	4.9
22. Kelvinside	192	7,535	6,600	16	8.3
23. Partick (East)	502	19,052	17,638	27	5.4
24. „ (West)	393	17,279	17,601	12	3.1
25. Whiteinch	493	15,169	14,893	19	3.9
26. Hutchesontown	998	27,110	26,435	41	4.1
27. Gorbals	1,182	27,957	27,371	99	8.4
28. Kingston	684	24,762	24,779	69	10.1
29. Kinning Park	834	24,656	24,315	53	6.4
30. Govan	1,028	27,366	27,301	41	4.0
31. Fairfield	594	18,092	18,539	19	3.2
32. Pollokshields	516	12,786	12,426	17	3.3
33. Camphill	220	11,879	10,953	9	4.1
34. Pollokshaws	333	13,446	14,906	11	3.3
35. Govanhill	516	16,537	17,329	19	3.7
36. Langside	200	10,954	8,958	9	4.5
37. Cathcart	382	12,179	10,574	12	3.1
38. Yoker and Knightswood ...	391	13,081	12,987	9	2.3
Institutions, &c.	82	—	—	14	—
CITY	22,176	19,802	19,894	1,271	5.7

TABLE VI.—GLASGOW.—DEATHS AND DEATH-RATES *per Million* IN EACH MUNICIPAL WARD, FOR THE YEAR 1937, AND CORRESPONDING RATES FOR 1936 AND 1935.

MUNICIPAL WARDS.	Deaths. 1937.	Death-rates.		
		1937.	1936.	1935.
1. Shettleston and Tollcross ...	599	12,422	12,406	13,509
2. Parkhead	582	14,269	13,226	11,646
3. Dalmarnock	454	14,471	15,987	15,013
4. Calton	456	18,076	18,528	17,390
5. Mile-end	346	17,797	16,765	14,221
6. Whitevale	343	16,566	16,557	15,300
7. Dennistoun	351	13,201	13,930	11,371
8. Provan	606	15,544	13,254	12,101
9. Cowlairs	311	14,455	11,857	13,432
10. Springburn	286	12,513	11,320	10,418
11. Townhead	403	16,138	16,466	15,691
12. Exchange	260	20,088	18,509	18,861
13. Blythswood	207	20,887	17,204	18,817
14. Anderston	361	15,439	16,610	16,034
15. Sandyford	298	16,568	16,548	14,858
16. Park	280	17,930	16,003	15,091
17. Cowcaddens	574	17,456	15,962	16,631
18. Woodside	527	16,904	16,784	16,088
19. Ruchill	660	12,722	11,488	10,640
20. North Kelvin	304	14,790	12,270	14,054
21. Maryhill	323	11,765	13,001	12,060
22. Kelvinside	308	12,087	12,644	13,568
23. Partick (East)	396	15,029	14,526	14,137
24. „ (West)	294	12,926	13,424	12,850
25. Whiteinch	438	13,508	12,620	12,758
26. Hutchesontown	568	15,429	15,342	14,714
27. Gorbals	753	17,810	18,556	17,041
28. Kingston	451	16,327	16,237	14,873
29. Kinning Park	492	14,545	14,420	14,869
30. Govan	580	15,440	16,823	14,116
31. Fairfield	393	11,970	11,643	11,246
32. Pollokshields	478	11,844	12,961	10,784
33. Camphill	243	13,121	14,090	13,445
34. Pollokshaws	326	13,164	11,893	12,716
35. Govanhill	406	13,012	12,328	11,204
36. Langside	221	12,104	14,031	11,692
37. Cathcart	360	11,478	11,986	11,918
38. Yoker and Knightswood	295	9,869	9,929	7,734
Institutions	723	—	—	—
Harbour	23	—	—	—
CITY	16,379	14,626	14,653	13,829

TABLE VII.—GLASGOW.—NUMBER OF OUTWARD AND INWARD TRANSFER
DEATHS FOR THE YEAR 1937.

CAUSE OF DEATH.					OUTWARD TRANSFERS.	INWARD TRANSFERS.
1.	Typhoid and Paratyphoid Fevers	...	...	...	—	—
35A.	Typhus Fever	...	...	...	—	—
35B.	Smallpox	...	...	...	—	—
2.	Measles	...	...	...	—	—
3.	Scarlet Fever	...	...	...	3	—
4.	Whooping Cough	...	...	...	1	—
5.	Diphtheria	...	...	...	8	1
6.	Influenza	...	...	...	14	2
7.	Encephalitis Lethargica	...	...	...	1	3
8.	Cerebro-spinal Fever	...	...	...	7	—
35C.	Erysipelas	...	...	...	—	—
9.	Tuberculosis of Respiratory System	...	...	...	42	59
10A.	Tuberculous Meningitis	...	...	...	23	2
10B.	Abdominal Tuberculosis	...	...	...	6	5
10C.	Other Tuberculous Diseases	...	...	...	16	9
11.	Syphilis	...	...	...	1	—
12.	General Paralysis of Insane (Tabes Dorsalis)	...	...	...	4	8
13.	Cancer, Malignant Disease	...	...	...	340	29
35D.	Rheumatic Fever	...	...	...	13	2
14.	Diabetes	...	...	...	42	3
15.	Cerebral Haemorrhage, &c.	...	...	...	62	28
35E.	Meningitis (not Tuberculous)	...	...	...	10	3
35F.	Other Nervous Diseases	...	...	...	47	41
16.	Heart Disease	...	...	...	191	95
17.	Aneurysm	...	...	...	6	—
18A.	Arterio-sclerosis	...	...	...	43	19
18B.	Other Circulatory Diseases	...	...	...	25	2
19.	Bronchitis	...	...	...	26	5
20.	Pneumonia (all forms)	...	...	...	103	16
21.	Other Respiratory Diseases	...	...	...	21	4
22.	Peptic Ulcer	...	...	...	66	1
23.	Diarrhoea, &c. (under 2 years)	...	...	...	33	6
24.	Appendicitis	...	...	...	82	6
25.	Cirrhosis of Liver	...	...	...	11	—
26.	Other Diseases of Liver, &c.	...	...	...	42	1
27.	Other Digestive Diseases	...	...	...	134	6
28.	Acute and Chronic Nephritis	...	...	...	76	8
29.	Puerperal Sepsis	...	...	...	21	1
30.	Other Puerperal Causes	...	...	...	14	—
31.	Congenital Debility, Premature Birth, Malformations, &c.	...	...	...	119	14
32.	Senility	...	...	...	10	5
33.	Suicide and other Deaths from Violence	...	...	...	149	67
34.						
35.	Other Defined Causes	...	...	...	288	11
36.	Causes Ill-Defined or Unknown	...	...	...	19	29
ALL CAUSES					2,119	491
All Causes, 1936					2,057	569

TABLE VIII.—GLASGOW.—DEATHS AND DEATH-RATES *per Million* FROM DIFFERENT CAUSES, FOR THE YEAR 1937, AND CORRESPONDING RATES FOR 1936 AND 1935.

CAUSE OF DEATH.	DEATHS. 1937.	ANNUAL DEATH-RATE PER MILLION.		
		1937.	1936.	1935.
1. Typhoid and Paratyphoid Fevers ...	5	4	12	13
35A. Typhus Fever	—	—	—	—
35B. Smallpox	—	—	—	—
2. Measles	29	26	278	7
3. Scarlet Fever	29	26	29	33
4. Whooping Cough	285	255	105	247
5. Diphtheria	116	104	48	103
6. Influenza	496	443	129	265
7. Encephalitis Lethargica	23	21	21	21
8. Cerebro-spinal Fever	54	48	34	37
35C. Erysipelas	34	30	39	49
9. Tuberculosis of Respiratory System	955	853	874	868
10A. Tuberculous Meningitis	121	108	146	116
10B. Abdominal Tuberculosis	35	31	32	30
10C. Other Tuberculous Diseases	81	72	85	69
11. Syphilis	21	19	28	27
12. General Paralysis of Insane (Tabes Dorsalis)	34	30	38	27
13. Cancer, Malignant Disease	1,560	1,393	1,440	1,397
35D. Rheumatic Fever	90	80	71	53
14. Diabetes	182	163	163	126
15. Cerebral Haemorrhage, &c.	925	826	977	986
35E. Meningitis (not Tuberculous)	30	27	54	38
35F. Other Nervous Diseases	325	290	313	277
16. Heart Disease	3,307	2,953	2,851	2,535
17. Aneurysm	44	39	28	40
18A. Arterio-sclerosis	679	606	456	431
18B. Other Circulatory Diseases	165	147	124	115
19. Bronchitis	486	434	454	453
20. Pneumonia (all forms)	1,543	1,378	1,426	1,355
21. Other Respiratory Diseases	180	161	171	180
22. Peptic Ulcer	109	97	102	105
23. Diarrhoea, &c. (under 2 years)	372	332	417	262
24. Appendicitis	91	81	72	93
25. Cirrhosis of Liver	40	36	39	33
26. Other Diseases of Liver, &c.	80	72	67	60
27. Other Digestive Diseases	344	307	324	281
28. Acute and Chronic Nephritis	339	303	326	306
29. Puerperal Sepsis	50	45	51	72
30. Other Puerperal Causes	62	56	63	61
31. Congenital Debility, Premature Birth, Malformations, &c.	941	840	823	833
32. Senility	354	316	317	309
33 } Suicide and Other Deaths from				
34 } Violence	599	535	557	482
35. Other Defined Causes	820	732	709	664
36. Causes Ill-Defined or Unknown	344	307	360	418
ALL CAUSES	16,379	14,626	14,653	13,880

TABLE IX.—GLASGOW, 1937.—DEATHS FROM

CAUSE OF DEATH.	MALES.														Total Males.
	-1	-2	-5	-10	-15	-20	-25	-35	-45	-55	-65	-75	75 +		
1. Typhoid and Paratyphoid Fevers	...	...	...	...	...	...	...	...	...	2	...	...	...	2
35A. Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
35B. Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Measles	3	11	3	1	...	...	...	...	...	...	...	...	...	18
3. Scarlet Fever	...	2	5	3	1	1	...	3	...	...	...	...	...	15
4. Whooping Cough	56	38	27	3	...	...	...	...	...	...	...	...	...	124
5. Diphtheria	3	5	20	17	5	2	1	2	...	2	1	...	...	58
6. Influenza	8	7	2	...	...	2	5	13	29	46	48	48	26	234
7. Encephalitis Lethargica	...	...	...	...	...	...	...	6	2	2	2	3	2	17
8. Cerebro-spinal Fever	11	4	3	7	3	3	1	2	3	3	1	...	...	41
35C. Erysipelas	2	...	...	...	...	...	...	2	1	3	4	7	1	20
9. Tuberculosis of Respiratory System	3	2	8	3	6	43	58	133	98	103	65	15	3	540	
10A. Tuberculous Meningitis	8	8	11	10	11	6	2	3	1	...	...	...	...	60
10B. Abdominal Tuberculosis	1	1	1	...	...	5	5	1	3	...	...	...	...	17
10C. Other Tuberculous Diseases	2	3	5	2	4	1	6	9	...	4	4	3	...	43	
11. Syphilis	2	...	...	...	...	...	...	1	1	...	5	3	1	13
12. General Paralysis of Insane (Tabes Dorsalis)	...	...	...	...	...	...	...	...	2	12	3	6	1	24
13. Cancer, Malignant Disease	1	...	...	1	...	2	4	14	36	111	238	270	90	767
35D. Rheumatic Fever	...	...	...	3	7	6	4	4	5	2	2	1	...	34
14. Diabetes	...	...	...	...	...	...	1	3	1	7	12	18	5	47
15. Cerebral Haemorrhage, &c.	...	...	1	...	...	2	...	5	6	30	97	159	95	395
35E. Meningitis (not Tuberculous)	6	1	2	2	...	1	1	2	1	1	2	...	...	19
35F. Other Nervous Diseases	44	6	3	4	3	6	6	10	13	20	29	11	7	162	
16. Heart Disease	4	2	...	2	5	7	27	75	193	369	601	417	1709	...	
17. Aneurysm	...	...	...	...	...	...	...	3	1	13	12	10	2	41
18A. Arterio Sclerosis	...	...	...	...	...	...	...	...	2	18	69	151	128	368
18B. Other Circulatory Diseases	3	...	...	...	...	...	1	1	2	14	30	23	17	91
19. Bronchitis	36	3	...	...	...	...	1	5	16	34	47	71	65	278
20. Pneumonia (all forms)	263	75	17	15	3	11	14	43	77	136	140	68	41	903	
21. Other Respiratory Diseases	12	2	2	3	1	...	1	4	15	12	13	14	13	92	
22. Peptic Ulcer	...	...	...	...	...	...	2	13	12	28	23	7	2	87
23. Diarrhoea, &c. (under 2 years)	211	13	...	...	...	...	...	...	...	...	...	...	...	224
24. Appendicitis	...	...	1	6	5	8	3	2	7	7	3	7	1	50
25. Cirrhosis of Liver	...	...	...	1	...	...	...	...	...	1	8	4	4	18
26. Other Diseases of Liver, &c.	1	...	...	...	...	...	...	2	1	2	1	12	...	19
27. Other Digestive Diseases	16	2	6	5	4	2	3	11	14	18	33	37	15	166	
28. Acute and Chronic Nephritis	...	1	...	2	2	2	6	9	13	22	48	38	18	161	
29. Puerperal Sepsis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30. Other Puerperal Causes	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31. Congenital Debility, Premature Birth, Malformations, &c.	522	2	1	3	1	...	...	...	...	...	...	...	...	529
32. Senility	...	...	...	...	...	...	...	...	...	...	3	39	102	144
33. Suicide and other Deaths from	...	...	...	...	...	...	...	...	...	...	...	...	...	...
34. Violence	15	7	24	25	13	13	20	52	40	53	62	54	31	409	
35. Other Defined Causes	49	7	8	7	6	16	4	22	38	44	97	110	64	472	
36. Causes Ill-Defined or Unknown	11	...	...	...	1	1	2	3	10	27	51	63	31	200
ALL CAUSES	1293	202	150	125	81	140	158	410	525	970	1522	1853	1182	8611	

DIFFERENT CAUSES IN SEXES AND AT SEVERAL AGE-PERIODS.

CAUSE OF DEATH.	FEMALES.														Total Females	Total Both Sexes
	-1	-2	-5	-10	-15	-20	-25	-35	-45	-55	-65	-75	75+			
1. Typhoid and Paratyphoid Fevers ... ..	...	...	...	...	...	...	...	2	1	...	...	...	...	3	5
35A. Typhus Fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
35B. Smallpox ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Measles	4	3	3	1	...	...	...	...	...	...	...	...	...	11	29
3. Scarlet Fever ... ..	...	3	7	2	...	1	...	...	1	...	...	...	...	14	29
4. Whooping Cough	83	48	24	6	...	...	...	...	...	...	...	...	...	161	285
5. Diphtheria	1	7	15	23	10	...	...	...	1	...	1	...	...	58	116
6. Influenza	11	1	1	1	2	5	5	15	18	26	49	69	59	262	496	
7. Encephalitis Lethargica ... ..	...	...	...	...	...	...	...	2	...	2	1	1	...	6	23
8. Cerebro-spinal Fever	9	1	1	...	...	...	2	...	...	...	...	...	...	13	54
35C. Erysipelas	4	...	...	...	...	...	...	...	1	1	2	5	1	14	34
9. Tuberculosis of Respiratory System	2	...	3	5	11	74	86	117	61	29	18	7	2	415	955	
10A. Tuberculous Meningitis	5	8	14	9	10	9	5	...	1	...	...	...	...	61	121
10B. Abdominal Tuberculosis	1	...	...	...	2	7	3	1	...	1	1	2	...	18	35
10C. Other Tuberculous Diseases	4	2	5	2	1	1	5	5	6	2	4	1	...	38	81	
11. Syphilis	2	...	...	...	...	...	...	...	1	2	2	1	...	8	21
12. General Paralysis of Insane (Tabes Dorsalis) ... ..	...	...	...	...	...	1	...	...	4	2	2	1	...	10	34
13. Cancer, Malignant Disease	1	1	...	1	1	1	...	8	60	136	234	235	115	793	1560	
35D. Rheumatic Fever ... ..	...	...	1	7	6	9	2	7	9	9	4	2	...	56	90
14. Diabetes ... ..	...	...	...	...	...	1	...	4	7	14	39	50	20	135	182
15. Cerebral Haemorrhage, &c.	1	2	1	...	...	1	...	4	8	52	115	175	171	530	925
35E. Meningitis (not Tuberculous)	4	1	1	1	1	...	...	...	2	1	...	...	...	11	30
35F. Other Nervous Diseases	21	1	5	2	5	9	9	19	20	14	22	26	10	163	325	
16. Heart Disease ... ..	...	2	2	5	6	11	11	35	80	149	293	503	501	1598	3307
17. Aneurysm ... ..	...	...	...	...	...	...	...	1	1	...	1	...	...	3	44
18A. Arterio Sclerosis ... ..	...	...	...	...	...	...	...	...	1	11	50	110	139	311	679
18B. Other Circulatory Diseases ... ..	...	...	...	...	...	...	...	...	3	13	16	27	15	74	165
19. Bronchitis	27	1	...	1	1	...	...	1	11	10	27	46	83	208	486
20. Pneumonia (all forms)	216	75	31	8	2	10	12	32	36	33	62	59	64	640	1543	
21. Other Respiratory Diseases	12	3	2	2	...	1	2	5	2	10	8	13	28	88	180	
22. Peptic Ulcer ... ..	...	...	...	...	...	...	...	...	...	9	7	6	...	22	109
23. Diarrhoea, &c. (under 2 yrs.)	138	10	...	...	...	...	...	...	...	...	...	...	...	148	372
24. Appendicitis ... ..	...	...	2	3	3	8	2	5	2	4	7	4	1	41	91
25. Cirrhosis of Liver ... ..	...	...	...	...	...	...	...	...	3	3	6	6	4	22	40
26. Other Diseases of Liver, &c. ... ..	...	...	...	...	...	1	...	1	3	7	22	16	11	61	80
27. Other Digestive Diseases	12	5	5	7	1	2	3	8	16	24	31	36	28	178	344	
28. Acute and Chronic Nephritis ... ..	...	...	2	1	3	1	2	11	16	29	54	39	20	178	339
29. Puerperal Sepsis ... ..	...	...	...	...	...	...	9	24	16	1	...	...	...	50	50
30. Other Puerperal Causes ... ..	...	...	...	...	...	3	11	29	19	...	...	...	...	62	62
31. Congenital Debility, Premature Birth, Malformations, &c.	409	3	...	...	...	...	...	...	...	...	...	...	...	412	941
32. Senility ... ..	...	...	...	...	...	...	...	...	...	...	3	30	177	210	354
33 } Suicide and other Deaths 34 } from Violence	10	4	8	14	10	9	10	10	12	13	15	31	44	190	599	
35. Other Defined Causes	34	8	10	4	4	7	6	22	27	58	58	72	38	348	820	
36. Causes Ill-Defined or Unknown	9	2	...	...	1	1	2	4	5	20	31	42	27	144	344
ALL CAUSES	1020	191	143	105	80	173	187	372	454	685	1185	1615	1558	7768	16379	

TABLE X.—GLASGOW, 1937.—DEATHS OCCURRING IN INSTITUTIONS FOR THE TREATMENT OF THE SICK, NURSING HOMES, &c.

CAUSE OF DEATH.	Local Authority General Hospitals and Poorhouses.	Local Authority Fever Hospitals and Sanatoria.	Local Authority Mental Hospitals.	Voluntary Hospitals and Infirmaries.	Nursing Homes, &c.	Totals.	% of all Deaths.	Outward Transfer Deaths.
1. Typhoid and Paratyphoid Fevers	—	5	—	—	—	5	100.0	—
35A. Typhus Fever	—	—	—	—	—	—	—	—
35B. Smallpox	—	—	—	—	—	—	—	—
2. Measles	—	21	—	—	—	21	72.4	—
3. Scarlet Fever	—	27	—	—	—	27	93.1	3
4. Whooping Cough	4	178	—	—	—	182	63.8	1
5. Diphtheria	2	108	—	2	—	112	96.5	8
6. Influenza	48	50	8	16	12	134	27.0	14
7. Encephalitis Lethargica	9	2	5	—	—	16	69.6	1
8. Cerebro-spinal Fever	1	50	—	1	—	52	96.3	7
35c. Erysipelas	3	24	—	1	1	29	85.3	—
9. Tuberculosis of Respira- tory System	137	397	20	38	—	592	62.0	41
10A. Tuberculous Meningitis	18	64	—	26	1	109	90.1	23
10B. Abdominal Tuberculosis	4	8	1	11	—	24	68.6	6
10c. Other Tuberculous Diseases	7	31	—	20	—	58	71.6	15
11. Syphilis	12	2	—	5	—	19	90.5	1
12. General Paralysis of Insane (Tabes Dorsalis)	19	—	8	—	1	28	82.3	4
13. Cancer, Malignant Disease	382	16	15	326	31	770	49.3	326
35D. Rheumatic Fever	40	4	—	25	1	70	77.8	13
14. Diabetes	47	1	—	42	6	96	52.7	41
15. Cerebral Haemorrhage, &c.	248	1	6	84	17	356	38.4	55
35E. Meningitis (not Tuberculous)	10	9	—	9	—	28	93.3	10
35F. Other Nervous Diseases	101	5	42	48	7	203	62.5	44
16. Heart Disease	1,046	33	43	228	38	1,388	42.0	165
17. Aneurysm	18	—	—	9	—	27	61.4	6
18A. Arterio-sclerosis	285	3	18	25	14	345	50.8	43
18B. Other Circulatory Diseases	47	3	—	33	4	87	52.7	24
19. Bronchitis	91	6	—	38	3	138	28.4	23
20. Pneumonia (all forms)	321	572	4	146	12	1,055	68.4	97
21. Other Respiratory Diseases	39	15	1	26	3	84	46.7	19
22. Peptic Ulcer	16	2	—	64	1	83	76.1	65
23. Diarrhoea, &c. (under 2 yrs.)	186	8	—	81	—	275	73.9	33
24. Appendicitis	9	1*	—	76	3	89	97.8	82
25. Cirrhosis of Liver	8	—	—	9	1	18	45.0	11
26. Other Diseases of Liver, &c.	11	1	—	45	4	61	76.2	42
27. Other Digestive Diseases	76	14	1	155	10	256	74.4	133
28. Acute and Chronic Nephritis	88	4	3	80	4	179	52.8	73
29. Puerperal Spesis	7	33	—	9	—	49	98.0	21
30. Other Puerperal Causes	17	1	—	37	1	56	90.3	14
31. Congenital Debility, Prema- ture Birth, Malformations, &c.	227	20	—	312	18	577	61.3	116
32. Senility	103	1	1	3	9	117	33.0	8
33. Suicide and other Deaths								
34. from Violence	45	4	—	248	5	302	50.4	135
35. Other Defined Causes	227	42	5	274	20	568	69.2	285
36. Causes Ill-defined or Un- known	20	2	1	7	3	33	9.6	5
YEAR, 1937	3,979	1,768	182	2,559	230	8,718	53.2	2,013
YEAR, 1936	3,840	1,865	203	2,563	268	8,739	53.3	1,967

TABLE XI.—GLASGOW, 1937.—DEATHS OF PERSONS WITH INSTITUTIONAL OR HARBOUR ADDRESS ONLY WITHIN THE CITY, ARRANGED ACCORDING TO USUAL RESIDENCE AS REGISTERED. (OUTWARD TRANSFERS EXCLUDED.)

CAUSE OF DEATH.	Staff with Acquired Insti- tutional Resi- dence.	OTHER THAN STAFF.					Total.
		Corporation General and Mental Hospitals and Poor- houses.	Model Lodging Houses.	Other Institutions	Residence outwith Glasgow, but not transferable	Residence outwith Scotland, and not transferable	
1. Typhoid and Paratyphoid Fevers	—	—	—	—	1	—	1
35A. Typhus Fever	—	—	—	—	—	—	—
35B. Smallpox	—	—	—	—	—	—	—
2. Measles	—	—	—	—	—	—	—
3. Scarlet Fever	—	—	—	—	—	—	—
4. Whooping Cough	—	—	—	—	—	—	—
5. Diphtheria	—	—	—	2	2	—	4
6. Influenza	—	5	5	3	4	1	18
7. Encephalitis Lethargica ...	—	—	—	—	—	—	—
8. Cerebro Spinal Fever ...	—	—	2	—	—	—	2
35C. Erysipelas	—	—	1	3	1	—	5
9. Tuberculosis of Respiratory System	1	4	36	6	1	2	50
10A. Tuberculous Meningitis ...	1	—	—	1	—	—	2
10B. Abdominal Tuberculosis ...	—	—	1	—	—	—	1
10C. Other Tuberculous Diseases	—	—	1	—	—	—	1
11. Syphilis	—	—	2	—	—	—	2
12. General Paralysis of Insane (Tabes Dorsalis) ...	—	4	1	—	—	—	5
13. Cancer, Malignant Disease	—	6	47	5	1	2	61
35D. Rheumatic Fever	—	—	—	—	—	1	1
14. Diabetes	—	—	1	—	—	2	3
15. Cerebral Haemorrhage, &c.	—	13	16	6	—	—	35
35E. Meningitis (not Tuberculous)	—	—	1	—	—	—	1
35F. Other Nervous Diseases ...	—	7	5	4	—	2	18
16. Heart Disease	1	36	162	19	—	3	221
17. Aneurysm	—	1	5	—	—	1	7
18A. Arterio-sclerosis	—	10	25	5	—	—	40
18B. Other Circulatory Diseases	—	—	3	1	—	2	6
19. Bronchitis	—	2	26	8	—	—	36
20. Pneumonia (all forms) ...	2	6	36	1	—	3	48
21. Other Respiratory Diseases	—	—	3	—	—	1	4
22. Peptic Ulcer	—	—	—	—	—	—	—
23. Diarrhoea, &c. (under 2 yrs).	—	1	—	1	—	—	2
24. Appendicitis	1	—	2	—	—	1	4
25. Cirrhosis of Liver	—	—	2	—	—	—	2
26. Other Diseases of Liver, &c.	—	—	—	—	—	—	—
27. Other Digestive Diseases	—	—	8	1	—	4	13
28. Acute and Chronic Nephritis	—	—	9	—	—	2	11
29. Puerperal Sepsis	—	—	—	—	—	—	—
30. Other Puerperal Causes ...	—	—	—	—	—	—	—
31. Congenital Debility, Premature Birth, Malformations, &c.	—	—	—	1	—	2	3
32. Senility	—	1	12	16	—	—	29
33. Suicide and other Deaths from Violence	1	1	28	6	—	7	43
34. Other Defined Causes ...	—	7	17	4	—	5	33
35. Causes Ill-Defined or Unknown	—	—	31	2	—	1	34
ALL CAUSES	7	104	488	95	10	42	746

TABLE XII.—GLASGOW.—DEATHS UNDER 1 YEAR AND DEATH-RATES PER 1,000 BIRTHS IN EACH MUNICIPAL WARD, FOR THE YEAR 1937.

MUNICIPAL WARDS.	Deaths —1 Year.	Death Rate per 1,000 Births.		
	1937.	1937.	1936.	1935.
1. Shettleston and Tollcross	87	87	79	99
2. Parkhead	111	129	104	92
3. Dalmarnock	72	90	114	112
4. Calton	78	128	143	133
5. Mile-end	73	141	139	101
6. Whitevale	59	117	151	98
7. Dennistoun	45	114	117	92
8. Provan	116	106	102	90
9. Cowlairs	43	96	64	79
10. Springburn	48	111	95	85
11. Townhead	68	119	144	119
12. Exchange	59	174	121	171
13. Blythswood	37	169	166	122
14. Anderston	71	121	125	123
15. Sandyford	44	117	111	114
16. Park	30	114	137	108
17. Cowcaddens	130	151	98	106
18. Woodside	82	107	99	84
19. Ruchill	107	105	119	88
20. North Kelvin	34	84	63	103
21. Maryhill	41	72	113	64
22. Kelvinside	8	42	66	80
23. Partick (East)	41	82	103	94
24. „ (West)	28	71	70	84
25. Whiteinch	48	97	95	88
26. Hutchesontown	115	115	122	106
27. Gorbals	162	137	157	131
28. Kingston	82	120	160	110
29. Kinning Park	80	96	112	96
30. Govan	106	103	129	95
31. Fairfield	48	81	97	83
32. Pollokshields	26	50	59	60
33. Camphill	9	41	53	62
34. Pollokshaws	24	72	64	72
35. Govanhill	47	91	82	75
36. Langside	5	25	48	45
37. Cathcart	15	39	47	61
38. Yoker and Knightswood	19	49	71	51
Institutions	12	—	—	—
Harbour	3	—	—	—
CITY	2,313	104	109	98

TABLE XIII.—GLASGOW, 1937.—MALE INFANT DEATHS AT GIVEN AGES AND FROM SEVERAL CAUSES.

CAUSE OF DEATH.	AGE IN WEEKS.					Total —4 weeks	AGE IN MONTHS.										Total —1 year.	
	AGE IN WEEKS.						AGE IN MONTHS.											
	-1	-2	-3	-4			-2	-3	-4	-5	-6	-7	-8	-9	-10	-11		-12
I CONGENITAL MALFORMATIONS	28	3	4	1		36	16	7	5	3	1	1	1	1	—	—	—	71
II. DISEASES OF EARLY INFANCY—																		
(a) Congenital Debility, Sclerema, and Icterus	29	8	10	4		51	10	6	8	4	—	—	—	1	—	—	—	80
(b) Premature Birth	180	46	29	17		272	15	3	—	—	—	—	—	1	—	—	—	291
(c) Injury at Birth	31	6	5	2		44	1	1	—	1	—	—	—	—	—	—	—	47
(d) Atelectasis	13	1	—	—		14	4	2	1	—	—	—	—	—	—	—	—	21
(e) Others	2	5	3	1		11	1	—	—	—	—	—	—	—	—	—	—	12
III. DISEASES OF RESPIRATORY SYSTEM	1	6	7	3		17	39	40	42	32	34	22	22	20	18	14	11	311
IV. DISEASES OF DIGESTIVE SYSTEM—																		
(a) Diarrhoeal	—	4	11	7		22	25	25	34	33	23	16	9	8	10	2	4	211
(b) Others	1	—	1	—		2	1	2	2	5	2	9	—	1	1	1	—	17
V. DISEASES OF NERVOUS SYSTEM	6	3	1	4		14	3	9	4	4	5	—	1	—	1	—	—	50
VI. TUBERCULOUS DISEASES—																		
(a) Pulmonary Tuberculosis	—	—	—	—		—	—	—	—	—	—	1	—	—	1	1	—	3
(b) Tuberculous Meningitis	—	—	—	—		—	—	—	—	—	1	1	1	—	1	1	—	8
(c) Abdominal Tuberculosis	—	—	—	—		—	—	—	—	—	—	—	1	—	—	—	—	1
(d) Other Forms	—	—	—	—		—	—	—	—	—	—	—	—	1	—	—	—	2
VII. INFECTIOUS DISEASES—																		
(a) Measles	—	—	—	—		—	—	—	—	—	—	—	—	1	1	—	—	3
(b) Scarlet Fever	—	—	—	—		—	—	—	—	—	—	—	—	3	2	9	—	56
(c) Whooping Cough	—	—	—	1		1	1	7	4	6	2	5	7	1	2	1	—	3
(d) Diphtheria	—	—	—	—		—	—	—	—	—	—	—	—	1	—	—	—	2
(e) Erysipelas	—	—	—	—		—	—	1	—	—	—	—	—	—	—	—	—	11
(f) Cerebro-spinal Fever	—	—	—	—		—	—	—	—	—	1	3	2	1	—	—	—	—
(g) Varicella	—	—	—	—		—	—	—	—	—	—	—	—	—	—	—	—	—
(h) Typhoid and Paratyphoid Fevers	—	—	—	—		—	—	—	—	—	—	—	—	—	—	—	—	—
VIII. SYPHILIS	—	—	1	—		1	—	1	—	—	—	—	—	—	—	—	—	2
IX. OVERLAYING	—	—	1	—		1	1	2	—	—	—	—	—	—	—	—	—	4
X. OTHER VIOLENCE	3	—	—	—		3	—	2	4	—	—	—	—	1	1	—	—	11
XI. ALL OTHER CAUSES	3	—	6	5		14	9	9	8	8	4	7	7	2	5	2	1	76
TOTALS	297	82	79	45		503	127	118	114	98	73	65	52	42	41	32	28	1,293

TABLE XIV.—GLASGOW, 1937.—FEMALE INFANT DEATHS AT GIVEN AGES AND FROM SEVERAL CAUSES.

CAUSE OF DEATH.	AGE IN WEEKS.				Total —4 weeks	AGE IN MONTHS.										Total —1 year.	
	—1	—2	—3	—4		—2	—3	—4	—5	—6	—7	—8	—9	—10	—11	—12	
I. CONGENITAL MALFORMATIONS ...	25	10	8	3	46	7	3	2	1	1	1	1	—	—	—	62	
II. DISEASES OF EARLY INFANCY—																	
(a) Congenital Debility, Sclerema, and Icterus ...	27	10	10	6	53	8	2	6	2	—	—	—	—	—	1	72	
(b) Premature Birth ...	124	37	20	12	193	13	3	1	—	—	1	—	—	—	—	211	
(c) Injury at Birth ...	26	—	3	1	30	—	—	—	—	—	—	—	—	—	—	30	
(d) Atelectasis ...	14	1	1	—	16	2	1	—	—	—	—	—	—	—	—	19	
(e) Others ...	6	5	1	1	13	1	1	—	—	—	—	—	—	—	—	15	
III. DISEASES OF RESPIRATORY SYSTEM	6	11	10	5	32	23	22	27	19	26	26	16	17	21	12	255	
IV. DISEASES OF DIGESTIVE SYSTEM—																	
(a) Diarrhoeal ...	—	10	5	9	24	22	15	16	18	9	11	4	2	2	4	138	
(b) Others ...	—	—	1	—	1	1	2	5	1	—	2	1	1	—	—	12	
V. DISEASES OF NERVOUS SYSTEM	4	1	—	1	6	2	7	3	2	—	—	2	1	2	—	26	
VI. TUBERCULOUS DISEASES—																	
(a) Pulmonary Tuberculosis ...	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	2	
(b) Tuberculous Meningitis ...	—	—	1	—	1	—	—	1	—	—	—	1	—	—	2	5	
(c) Abdominal Tuberculosis ...	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	
(d) Other Forms ...	—	—	—	—	—	—	—	—	—	—	—	1	1	—	2	4	
VII. INFECTIOUS DISEASES—																	
(a) Measles ...	—	—	—	—	—	1	—	—	—	—	—	1	—	—	2	4	
(b) Scarlet Fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
(c) Whooping Cough ...	—	—	—	—	—	8	2	5	5	7	10	9	5	12	11	83	
(d) Diphtheria ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	
(e) Erysipelas ...	—	2	—	—	2	1	—	1	—	—	—	—	—	—	—	4	
(f) Cerebro-spinal Fever	—	—	—	—	—	1	1	1	—	1	—	3	1	—	1	9	
(g) Varicella ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
(h) Typhoid and Paratyphoid Fevers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
VIII. SYPHILIS ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	
IX. OVERLAYING ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	
X. OTHER VIOLENCE ...	2	1	1	1	5	2	—	1	1	—	—	—	—	—	—	9	
XI. ALL OTHER CAUSES ...	1	7	7	4	19	6	8	2	4	4	2	1	3	1	2	55	
TOTALS ...	235	95	68	43	441	100	67	73	53	48	52	38	41	32	38	37	1,020

TABLE XV.—GLASGOW, 1935-1937.—ABSTRACT OF NOTIFICATIONS UNDER NOTIFICATION OF BIRTHS ACT, 1907, AND RESULTS OF VISITS.

	1937.	1936.	1935.
Total Number of Notifications	23,284	23,488	23,299
Doctor at Home	4,988	4,966	5,164
Doctor in Institution	7,392	7,225	6,564
Maternity Hospital (Outdoor) Nurse ...	4,454	4,641	4,742
Certified Midwife	6,436	6,634	6,803
Others	14	22	26
Total Cards issued	18,296	18,522	18,135
Total Cards returned	18,370	18,731	17,949
Full Information	17,997	18,251	17,460
Doctor found in Attendance	5	9	5
Others	368	470	484

TABLE XVI.—GLASGOW, 1935-1937.—BIRTHS NOTIFIED SHOWING MEDICALLY AND NOT MEDICALLY ATTENDED.

	1937.	1936.	1935.
Notifications Received— <i>less Duplicates</i> —			
Total	23,284	23,488	23,299
Live-births	22,334	22,442	22,279
Still-births	950	1,046	1,020
Per cent. Still-births to Total	4·0	4·4	4·3
Medically attended—			
Births at Home	4,988	4,966	5,164
In Institutions	7,392	7,225	6,564
Total	12,380	12,191	11,728
Per cent.	53·1	51·9	50·3
Still-births at Home	166	201	194
Still-births in Institutions	526	539	505
Not Medically attended—			
Maternity Hospital (Outdoor) Nurse ...	4,454	4,641	4,742
Certified Midwives	6,436	6,634	6,803
Others	14	22	26
Total	10,904	11,297	11,571
Per cent.	46·8	48·1	49·7
Still-births	258	306	321

TABLE XVII.—GLASGOW, 1936 AND 1937.—CASES OF INFECTIOUS DISEASES REGISTERED AND NUMBERS OF THESE TREATED IN FEVER HOSPITALS, &c.*

	1937.					1936.				
	Fever Hospitals and Sanatoria.	Corporation General Hospitals.	Other Institutions.	Home.	Total.	Fever Hospitals and Sanatoria.	Corporation General Hospitals.	Other Institutions.	Home.	Total.
A.—Notifiable—										
Typhus Fever	—	—	—	—	—	—	—	—	—	—
Enteric Fever	16	—	—	4	20	25	—	—	1	26
Paratyphoid B	50	—	1	—	51	178	—	2	12	192
Continued and Undefined Fever	—	1	—	3	4	1	—	—	1	2
Puerperal Fever	393	85	36	21	535	427	37	20	16	500
Puerperal Pyrexia	98	51	114	66	329	43	30	77	71	221
Smallpox	—	—	—	—	—	—	—	—	—	—
Scarlet Fever	5,087	4	2	508	5,601	3,840	2	—	464	4,306
Diphtheria and Membranous Croup	2,291	4	9	26	2,330	1,928	1	4	25	1,958
Erysipelas	667	4	3	364	1,038	644	11	3	319	977
Cholera	—	—	—	—	—	—	—	—	—	—
Cerebro-spinal Fever	97	1	5	3	106	66	—	3	5	74
Ophthalmia Neonatorum	47	5	34	710	796	42	—	15	649	706
Trachoma	—	2	—	13	15	—	4	—	9	13
Acute Encephalitis Lethargica	1	15	—	14	†230	2	6	—	5	†13
Acute Polio-Encephalitis	—	1	—	—	1	—	—	—	—	—
Acute Poliomyelitis	—	—	1	—	1	16	—	8	2	26
Acute Primary Pneumonia	3,147	314	251	2,148	5,860	3,205	330	208	2,084	5,827
Acute Influenzal Pneumonia	221	20	19	302	562	112	6	1	89	208
Malaria	3	1	—	10	14	8	—	—	6	14
Dysentery	145	65	8	55	273	98	71	7	63	239
Infective Jaundice	—	—	3	—	3	1	—	1	—	2
Anthrax	1	—	—	—	1	—	—	—	—	—
Pulmonary Tuberculosis	1,133	—	—	521	1,654	1,179	—	—	468	1,647
Other Forms of Tuberculosis	330	—	—	312	642	428	—	—	283	711
B.—Not Notifiable—										
Measles	256	11	1	2,004	2,272	1,623	26	6	18,541	20,196
German Measles	23	—	—	184	207	141	1	1	1,490	1,633
Whooping Cough	697	2	2	8,014	8,715	359	5	—	3,879	4,243
Chickenpox	218	3	1	6,003	6,225	187	17	—	6,646	6,850
Mumps	16	—	—	—	16	28	—	2	21	51
Pemphigus Neonatorum	29	—	—	4	33	20	—	—	5	25
Totals	14,966	589	490	21,289	37,334	14,601	547	358	35,154	50,660
Notified, but diagnosis altered to Non-Infectious Diseases	1,607	—	—	3	1,610	1,581	1	—	4	1,586
Total Registered	16,573	589	490	21,292	38,944	16,182	548	358	35,158	52,246

* Where patients suffer from two or more diseases, each disease is reckoned as a case.

† Includes 29 chronic cases notified for the first time during 1937.

‡ Includes 12 chronic cases notified for the first time during 1936.

Apart from cases of pneumonia admitted to Corporation General Hospitals and Voluntary Institutions in times of pressure; cases of puerperal fever, puerperal pyrexia, and ophthalmia neonatorum occurring in other than Fever Hospitals and allowed to remain; and cases of trachoma treated in Stobhill Hospital; the cases shown under the headings "Corporation General Hospitals" and "Other Institutions" are, for the most part, accidental.

TABLE XVIII.—GLASGOW, 1933-1937.—CASE-RATES *per Million*
FOR INFECTIOUS DISEASES.

	CASE RATES PER MILLION.				
	1937.	1936.	1935.	1934.	1933.
A.—Notifiable—					
Typhus Fever	—	—	—	—	—
Enteric Fever and Paratyphoid B.	63	195	164	39	122
Continued and Undefined Fever	4	2	4	2	2
Puerperal Fever	478	447	526	555	492
Puerperal Pyrexia	294	197	226	286	354
Smallpox	—	—	—	—	—
Scarlet Fever	5,001	3,845	3,605	5,336	7,593
Diphtheria and Membranous					
Croup	2,081	1,749	2,207	2,374	2,148
Erysipelas	927	873	906	996	1,012
Cholera	—	—	—	—	—
Cerebro-spinal Fever	94	66	74	85	140
Ophthalmia Neonatorum	711	631	671	720	807
Trachoma	13	12	16	15	18
Acute Encephalitis Lethargica	27	12	13	7	12
Acute Polio-Encephalitis	1	—	—	—	5
Acute Poliomyelitis	1	23	2	8	31
Acute Primary Pneumonia	5,233	5,205	5,151	5,785	4,392
Acute Influenzal-Pneumonia	502	186	362	269	315
Malaria	12	12	12	21	17
Dysentery	244	213	120	59	64
Infective Jaundice	3	2	—	—	1
Pulmonary Tuberculosis	1,477	1,471	1,569	1,475	1,465
Other Forms of Tuberculosis	573	635	602	609	720
B.—Not Notifiable—					
Measles	2,029	18,038	798	22,056	856
German Measles	185	1,458	376	159	1,659
Whooping-cough	7,782	3,790	6,944	5,321	5,838
Chickenpox	5,559	6,118	5,158	5,028	6,178
Others	44	68	62	20	13
Totals	33,338	45,248	29,568	51,225	34,254

TABLE XIX.—

CASES OF INFECTIOUS DISEASE REGISTERED IN EACH MONTH—SHOWING

	Typhus Fever.		Enteric including Paratyphoid Fever.		Continued and Undefined Fever		Puerperal Fever		Puerperal Pyrexia.		Smallpox.		Scarlet Fever.		Diphtheria and Membranous Croup.		Erysipelas.		Cerebro-spinal Fever.		Ophthalmia Neonatorum		Trachoma.		Acute Encephalitis Letargica		Acute Polio-Encephalitis.		Acute Poliomyelitis.	
	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.
Jan.	3	...	...	...	28	16	13	24	...	...	345	47	162	1	52	36	14	1	5	71	...	...	...	1	...	...	...	...
Feb.	5	...	...	...	30	15	11	12	...	...	393	41	165	2	46	26	13	1	3	70	...	...	...	4	...	...	...	...
March	5	...	...	...	35	13	10	13	...	...	409	43	1173	5	70	33	7	...	5	61	...	...	...	10	...	...	...	...
April	2	...	...	...	35	8	16	26	...	...	420	38	161	6	56	22	17	1	5	55	...	...	1	8	...	...	...	...
May	8	1	...	1	34	5	11	22	...	...	482	44	172	3	45	17	5	2	5	69	...	...	...	1	...	...	...	...
June	21	...	...	1	27	4	2	20	...	...	470	38	199	4	56	13	10	1	7	68	...	3	...	...	...	...	...	...
July	4	1	...	...	40	8	2	18	...	...	355	19	112	3	38	26	8	...	5	55	...	...	...	2	...	...	...	...
August	3	1	...	1	31	13	7	21	...	...	348	20	202	1	48	23	7	...	4	72	...	1	...	...	1	...	...	...
Sept.	6	...	...	...	31	9	11	19	...	...	403	28	220	1	54	28	4	...	...	84	...	4	...	1	...	...	...	1
October	3	...	...	1	44	20	6	20	...	...	502	58	244	2	63	45	4	...	...	38	...	2	...	2	...	...	...	...
Nov.	3	...	...	...	25	14	4	18	...	...	560	76	250	2	66	49	6	...	5	39	...	2	...	...	...	...	...	...
Dec.	3	2	...	...	33	17	5	18	...	...	400	62	231	9	73	53	2	3	3	67	...	3	...	...	...	...	...	...
	66	5	...	4	393	142	98	231	...	...	5087	514	2291	39	667	371	97	9	47	749	...	15	1	29	...	1	...	1

* 3 Infective Jaundice; 1 Anthrax; 16 Mumps; 33 Pemphegies Neonatorum

GLASGOW.

NUMBERS TREATED IN FEVER HOSPITALS DURING 1937.

Acute Primary Pneumonia.		Acute Influenzal Pneumonia.		Malaria.		Dysentery.		Pulmonary Tuberculosis.		Other Forms of Tuberculosis.		Measles.		German Measles.		Whooping- cough.		Chickenpox.		Totals.	
Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.
415	504	125	216	1	1	5	2	88	45	20	26	...	15	1	13	117	1406	9	424	1403	2849
198	223	26	50	1	...	13	...	108	43	35	27	2	34	2	15	108	1685	13	309	1172	2557
249	151	10	12	...	1	19	4	112	36	41	33	...	46	...	16	138	1703	10	455	1293	2635
227	130	5	3	...	...	3	7	117	34	41	23	3	34	7	38	139	1711	21	761	1276	2905
240	121	8	...	...	...	8	1	113	36	34	28	2	60	4	23	65	604	25	750	1261	1788
206	78	2	6	...	1	6	1	98	41	29	33	28	96	2	24	39	385	26	1072	1228	1889
152	68	3	3	1	2	8	5	91	24	30	24	25	38	...	3	25	47	[43	112	942	458
137	65	...	2	...	1	13	15	100	41	25	20	6	12	3	3	23	87	23	116	980	516
191	58	7	2	...	1	21	18	93	47	16	16	4	45	2	8	14	119	9	307	1086	796
330	141	10	6	...	2	15	9	87	48	19	31	11	144	...	7	11	75	8	402	1357	1053
458	536	12	17	...	1	21	7	79	47	27	23	62	484	...	16	10	115	18	640	1606	2086
344	638	13	24	...	1	13	59	47	79	13	28	113	1008	2	18	8	81	13	659	1316	2829
3147	2713	221	341	3	11	145	128	1133	521	330	312	256	2016	23	184	697	8018	218	6007	14920	22361

Add—* Others ... 46 7

Altered Diagnosis ... 1607 3

16573 22371

TABLE XX.—HOSPITAL BED ACCOMMODATION FOR INFECTIOUS DISEASES
IN GLASGOW SINCE 1865 (EXCLUDING TUBERCULOSIS).

YEAR.	PARISH.			Glasgow Royal Infirmary.	LOCAL AUTHORITY.						Total Beds.	Population in Thousands.	Beds per Thousand.
	City.	Barony.	Govan.		Parliamentary Road.	Belvidere Fever.	Belvidere Smallpox.	Ruchill.	Shieldhall.	Knightswood.			
1865	100	120	54	200	136	—	—	—	—	—	610	428	1.4
1866	100	120	54	175	136	—	—	—	—	—	585	438	1.3
1867	—	120	54	100	136	—	—	—	—	—	410	446	0.9
1869	—	120	54	135	136	—	—	—	—	—	445	464	1.0
1870	—	120	54	100	250	250	—	—	—	—	774	471	1.7
1872	—	120	—	100	250	250	—	—	—	—	720	495	1.4
1875	—	—	—	100	250	250	—	—	—	—	600	500	1.2
1876	—	—	—	—	250	250	—	—	—	—	500	502	1.0
1878	—	—	—	—	120	250	150	—	—	—	520	507	1.0
1880	—	—	—	—	120	250	150	—	—	—	520	510	1.0
1881	—	—	—	—	120	370	150	—	—	—	640	512	1.2
1882	—	—	—	—	120	220	150	—	—	—	490	518	1.0
1887	—	—	—	—	120	390	150	—	—	—	660	545	1.2
1893	—	—	—	—	200	390	150	—	—	—	740	678	1.1
1900	—	—	—	—	200	390	150	440	—	—	1,180	744	1.6
1901	—	—	—	—	200	390	220	440	—	—	1,250	764	1.6
1906	—	—	—	—	—	390	220	440	—	—	1,050	836	1.3
1910	—	—	—	—	—	390	220	542	—	—	1,152	884	1.3
1913	—	—	—	—	—	390	220	542	100	81	1,333	1,032	1.3
1915	—	—	—	—	—	390	220	542	100	10	1,262	1,035	1.2
1923	—	—	—	—	—	610	—	542	100	114	1,366	1,074	1.3
1925	—	—	—	—	—	610	—	542	100	134	1,386	1,090	1.3
1926	—	—	—	—	—	610	—	542	120	134	1,406	1,090	1.3
1929	—	—	—	—	—	610	—	542	100	170	1,422	1,089	1.3
1937	—	—	—	—	—	*642	—	542	100	170	1,454	1,133	1.3

* Ward for Venereal Diseases with 24 beds not included.

Smallpox accommodation (20 beds) is provided at Robroyston Hospital, and in the event of an epidemic of smallpox the tuberculosis wards of Robroyston Auxiliary Hospital (100 beds) would be utilised in the first place, and, if necessary, the wards of the main hospital.

At Robroyston Hospital Puerperal Fever accommodation (56 beds) has been provided since October, 1930; and accommodation for abortion cases (10 beds) since February, 1934.

The City has also a part interest in Lightburn Hospital (about 8 beds). During 1935, the City gave up its interest in Darnley and Blawarthill Hospitals, although arrangements still continue under which cases from the Glasgow area formerly served by the hospitals are still admitted for treatment.

TABLE XX.—(Continued).

INSTITUTIONAL ACCOMMODATION FOR FEVER AND TUBERCULOSIS PATIENTS :—

			Fever.	Tuberculosis.	Total.
Belvidere Hospital	...	...	*666	—	666
Ruchill Hospital	...	...	542	272	814
Shieldhall Hospital	...	...	100	—	100
Knightswood Hospital	...	...	170	88	258
Bellefield Sanatorium	...	...	—	108	108
Robroyston Sanatorium	...	...	86	482	568
Mearnskirk Sanatorium	...	...	—	500	500
Baird Street Reception House	...	...	†24	—	24
			<hr/> 1,588	<hr/> 1,450	<hr/> 3,038
Stobhill General Hospital	...	...	—	60	60
Southern General Hospital	...	...	—	5	5
Western District Hospital	...	...	—	2	2
Barnhill Institution	...	...	—	34	34
			<hr/> —	<hr/> 101	<hr/> ‡101
Beds in Corporation Institutions			<hr/> 1,588	<hr/> 1,551	<hr/> 3,139
Lightburn Hospital	...	...	3	—	3
Blawarthill Hospital	...	...	6	2	8
Darnley Hospital	...	...	1	—	1
Bridge of Weir Sanatorium	...	...	—	74	74
Ochil Hills Sanatorium	...	...	—	40	40
Lanfine Home	...	...	—	27	27
Glenlomond Sanatorium	...	...	—	8	8
Tornadee Sanatorium	...	...	—	2	2
Beds in other Institutions	...	...	<hr/>10	<hr/> 153	<hr/> 163
TOTAL	...	...	<hr/>1,598	<hr/> 1,704	<hr/> 3,302

* Accommodation for Venereal Disease (24 beds) included.

† Accommodation for Venereal Disease and Ophthalmia Neonatorum (24 beds).

‡ Average daily number occupied during 1937.

TABLE XXI.—SHOWING NUMBERS, AVERAGE RESIDENCE AND COST HOSPITALS DURING THE YEAR ENDED 31ST MAY, 1937.

COST OF TREATMENT OF PATIENTS (Ordinary Expenditure, as per Public Health Account and Lunacy and Mental Deficiency Account, excluding Interest and Sinking Fund Charges, and less Revenue Items received otherwise than for the treatment of patients).

1. Fever Hospitals and Sanatoria—

Belvidere	...	...	...	...	£70,395	4	6
Ruchill	...	...	...	...	93,099	14	9
Shieldhall	...	...	...	...	14,576	3	3
Knightswood	...	...	...	...	28,605	12	6
Robroyston	...	...	...	...	48,765	14	5
Bellefield	...	...	...	...	13,736	14	10
Mearnskirck	...	...	...	...	45,178	8	2
					<u>£314,357 12 5</u>		

2. General Hospitals—

Stobhill	...	...	...	...	£171,988	0	9
Eastern District	...	...	...	...	30,963	6	2
Western District	...	...	...	...	28,736	17	0
Southern General	...	...	...	...	127,504	18	4
					<u>£359,193 2 3</u>		

3. Mental Hospitals—

Woodilee	...	...	...	...	£81,856	19	7
Gartloch	...	...	...	...	61,840	11	0
Hawkhead	...	...	...	...	62,807	10	4
Stoneyetts	...	...	...	...	16,570	16	10
Lennox Castle	...	...	...	...	40,074	16	10
					<u>£263,150 14 7</u>		

					Fever Hospitals and Sanatoria.	General Hospitals.	Mental Hospitals.
Average Daily Expenditure	...	...	...	...	£861 5 1	£984 1 10	£720 19 3
Average Daily Cost per Patient	...	...	...	...	0 6 5	0 5 2	0 4 1
Average Cost of Treatment per Patient	...	...	...	...	19 7 9	9 3 2	—
Average Cost of Bed per Year	...	...	...	...	117 2 1	94 5 10	74 10 5
Average Residence of Patients dismissed (days)	...	...	...	...	60·4	35·5	—

Patients Dismissed from Corporation Fever Institutions, classified as to Disease, Average Residence of Patients Dismissed, and Average Cost at the Daily Rate of 7s. 10d.

		Number Dismissed.	Total Days Treatment.	Average Residence	Average Cost per Patient.	Total Approx. Cost.
Enteric Fever	...	113	7,177	63·51	£24 17 6	£2,811
Puerperal Fever	...	529	18,512	34·99	13 14 1	7,251
Scarlet Fever	...	4,355	162,748	37·37	14 12 9	63,743
Diphtheria	...	1,913	85,972	44·94	17 12 0	33,672
Erysipelas	...	639	12,307	19·26	7 10 10	4,820
Cerebro-spinal Fever	...	85	2,442	28·73	11 5 1	956
Enceph. Leth., &c.	...	21	5,837	277·95	108 17 4	2,286
Acute Primary Pneumonia & Influenzal-Pneumonia	...	3,280	95,648	29·16	11 8 5	37,461
Tropical Diseases	...	132	3,351	25·39	9 18 10	1,312

OF TREATMENT OF PATIENTS IN FEVER, GENERAL, AND MENTAL

	Number Dismissed.	Total Days Treatment.	Average Residence.	Average Cost per Patient.	Total Approx. Cost.
Measles	827	26,915	32.55	12 15 0	10,542
Whooping-cough	728	27,921	38.35	15 0 5	10,936
Chickenpox	110	3,652	33.20	13 0 1	1,430
Phthisis	1,571	258,394	164.48	64 8 5	101,204
Non-Pulmonary Tuber- culosis	765	268,371	350.81	137 8 0	105,112
Other Infectious Diseases	144	2,533	17.59	6 17 9	992
Venereal Diseases	194	6,120	31.55	12 7 2	2,397
All other Diseases	1,583	37,434	23.65	9 5 3	14,662

Number of Patients Treated and Average Daily Cost per Patient.

(1) In Fever Hospitals and Sanatoria.

	Remain- ing, 31/5/36	Admitted 1936-37.	Total under Treatment.	Dismissed, 1936-37.	Remain- ing 31/5/37.	Average Daily Number.	Average Daily Cost per Patient
Belvidere Hospital ...	516	5,408	5,924	5,377	547	515	7/6
Ruchill Hospital ...	848	6,741	7,589	6,784	805	792	6/5
Shieldhall Hospital ...	102	1,108	1,210	1,103	107	93	8/6
Knightshood Hospital	249	1,832	2,081	1,861	220	220	7/1
Robroyston Hospital	455	1,138	1,593	1,149	444	456	5/10
Bellefield Sanatorium	108	179	287	181	106	108	7/-
Mearns Kirk Hospital	509	521	1,030	534	496	490	5/1
Total ...	2,787	16,927	19,714	16,989	2,725	2,674	6/5*
Lightburn Jt. Hospital	2	40	42	39	3	4	—
Grand Total ...	2,789	16,967	19,756	17,028	2,728	2,678	—

(2) In General Hospitals.

Stobhill Hospital ...	1,771	13,755	15,526	13,780	1,746	1,725	5/6
Eastern Dist. Hospital	322	3,626	3,948	3,646	302	316	5/5
Western Dist. Hospital	205	5,291	5,496	5,241	255	251	6/3
Southern Gen. Hosp.	1,585	7,022	8,607	7,192	1,415	1,499	4/8
Total ...	3,883	29,694	33,577	29,859	3,718	3,791	5/2†

(3) In Mental Hospitals.

Woodilee Mental Hosp.	1,234	89	1,323	149	1,174	1,219	3/8
Gartloch Mental Hosp.	875	85	960	79	881	873	3/11
Hawkhead Mental Hosp.	886	125	1,011	88	923	876	3/11
Stoneyetts Hospital ...	348	7	355	355	§	¶343	4/11
Lennox Castle Inst. ...	132	736	868	19	849	358	6/2||
Total ...	3,475	1,042	4,517	690	3,827	3,669	4/1‡

* Interest and Sinking Fund (excluded) averages 1/5d. per patient per day.

† Interest and Sinking Fund (excluded) averages 2d. per patient per day.

‡ Interest and Sinking Fund (excluded) averages 10d. per patient per day.

§ Patients transferred to Lennox Castle, December, 1936.

¶ Average of 198 days.

|| Institution only partially occupied throughout the year.

TABLE XXII.—SPECIAL SANITARY OPERATIONS.

	YEAR.		
	1937.	1936.	1935.
(a) FOOD AND DRUGS, &c.—			
I. Dairies.			
Registered during year	231	253	265
Removed from Register	260	328	332
On Register at 31st December	1,770	1,799	1,874
Number of Inspections	21,763	22,969	22,077
Contraventions of Orders, Acts, or Bye-laws	39	24	15
Prosecutions for same	4	—	9
Repairs or Improvements effected	27	25	21
II. Dealers in Ice Cream.			
Registered during the year	32	59	83
Removed from Register	65	46	105
On Register at 31st December	534	567	554
Number of Inspections	7,210	7,582	7,393
Contraventions of Acts, Orders, or Bye-laws	16	4	4
Prosecutions for same	—	—	2
Repairs or Improvements effected	9	4	5
III. Byres for Milch Cows.			
Number of Dairy Byres as at 31st Dec.	35	39	44
Number of Cows licensed for	911	995	1,081
Average number kept	769	838	845
Number of Inspections	401	409	354
IV. Unwholesome Food.			
Number of Inspections	11,636	12,046	11,104
Number of Lots dealt with	70	50	60
Nature of Food destroyed at Inspector's instance with Owner's consent—			
Cheese (lbs.)	—	—	71,224
Canned Food (various)	774½	500	5,973
Fruit (Dried and Soft)	23,390	39,816	36,636
Ham (Boiled)	22	14½	—
Pork (Fresh)	—	224	12
Confectionery	—	—	3
Cockernuts	—	—	5,040
Vegetables	1,758	25,336	124,546
Condensed Milk	1,120	—	—
Fruit Juice (galls.)	—	56	—
Ice Cream	25	—	—
Fruit Salad (in Jelly) (lbs.)	11,956	—	—
Mushrooms	12	—	—
Pork and Brawn	45	—	—
V. Food and Drugs (Adulteration) Act.			
Informal Samples analysed	3,705	3,685	3,620
Statutory Samples analysed	1,339	1,331	1,314
Statutory Samples found non-genuine	70	86	76
Proceedings instituted	53	72	56
Number of Convictions	48	67	48
Amount of Fines imposed	£120 3s. 6d.	£149 5s.	£99 18s.
Number dismissed or found "Not proven"	1	1	2
Number deserted <i>simpliciter</i>	3	—	4
Warranty Defence Sustained	1	2	—
Number pending	—	2	—
Number withdrawn and Expenses paid	—	—	2
Amount of Expenses paid	—	—	£2 2s.

TABLE XXII.—*Continued.*

	YEAR.		
	1937.	1936.	1935.
V. Food and Drugs (Adulteration) Act—<i>Continued.</i>			
Prosecution for False Warranty	—	1	—
Amount of Fine imposed	—	—	—
Prosecutions for Margarine offences	—	—	—
Fines and Expenses imposed	—	—	—
Non-convictions	—	—	—
Vending Milk without name and address being on vessel	1	—	—
Number of Convictions	1	—	—
Amount of Fines	10s.	—	—
VI. Merchandise Marks Acts and Orders.			
Number of Prosecutions	16	16	16
Number of Convictions	16	16	16
Amount of Fines imposed	£15 10s.	£13	£12 5s.
(b) SMOKE ABATEMENT— Smoke Prevention.			
Glasgow Police (Further Powers) Act, 1892, Sec. 31, and Motor Vehicles (Construction and Use) Regulations, 1931—			
Number of Inspections of Boiler and other Furnaces	1,040	1,205	1,188
Number of Observations of Chimneys	25,997	28,051	27,224
Number of Intimations of Excess Smoke given	385	403	306
Number of Warning Notices to those contravening the Act	28	49	24
Number of Prosecutions in Police Courts	28	34	34
Number of Convictions	28	34	32
Amount of Fines imposed	£37 10s.	£42 15s.	£35 15s.
Number of Prosecutions withheld on receiving a promise from Offenders to improve the Furnace Plant	2	—	3
Number of Prosecutions withheld on account of accidents to Furnace Plant, or regular Fireman temporarily off duty	—	—	—
Number of New Steam Boilers installed to give increased power	28	26	17
Number of Mechanical Stokers fitted to Steam and Heating Boiler Furnaces	51	16	27
Number of Steam Boiler Furnaces fitted with Smoke-preventing Appliances	4	9	9
Number of Furnaces in which Anthracite, Coke, or other non-bituminous Fuel has been substituted for ordinary Coal	30	28	26
Number of Furnaces adapted for Smokeless Combustion of Oil Fuel	15	2	—
Number of Steam Boilers replaced by Electric Motors (using Corporation power)	3	4	13
Number of new Chimneys erected or existing Chimneys heightened to give increased draught and carry gases higher	17	15	21
Number of Improvements to Furnaces not coming under any of the above headings	20	17	16
Number of new Central Heating Boilers stalled	35	—	10

TABLE XXIII.

OPERATIONS OF SANITARY SECTION.

1. (a) Nuisances.	Central.	Northern.	Eastern.	South-Eastern.	South-Western.	City.	
						1937.	1936.
INSPECTIONS made—							
Nuisances	137,260	141,470	174,246	129,852	115,394	698,222	710,578
Bug Disinfestation	1,164	2,236	1,200	194	823	5,617	6,574
Water Storage Cisterns	417	1,129	125	566	42	2,279	3,327
Limewashings	10,113	5,770	8,661	5,822	10,153	40,519	38,409
Stair Cleaning	16,456	6,278	23,121	14,035	18,517	78,407	71,925
Drain Testing	16,034	6,028	7,312	1,816	5,234	36,424	36,252
Total	181,444	162,911	194,665	152,285	150,163	861,468	867,065
Nuisances removed or remedied ...	12,114	10,488	12,555	10,508	11,369	57,034	61,492
Consisting of—							
Apartments, Lobbies, or W.C.'s, with insufficient light or ventilation, or otherwise defective in construction	3	1	3	—	17	24	11
Defective Chimneys causing nuisance	154	109	87	124	135	609	737
Disrepair or dampness in Dwelling-houses	1,276	1,438	2,246	1,663	1,484	8,107	9,776
Offensive smells from Drains, or other reasonable grounds—smoke test	111	7	135	13	14	280	278
Drains, Conductors, Soil-pipes, or Rhones choked or defective	4,108	4,498	4,380	3,762	4,226	20,974	23,551
Sanitary Fittings choked or defective	1,039	731	883	672	1,334	4,659	5,229
Dirty Houses and Bedding	49	138	507	193	18	905	1,011
Dirty Closets, Stairs, &c. (daily and bi-weekly cleaning)	555	615	1,078	1,305	1,197	4,750	4,553
Houses overcrowded	—	—	—	137	—	137	68
Common passages, stairs or staircases not in a cleanly state (limewashing or painting) ...	2,370	1,276	1,705	780	1,047	7,178	6,547
Animals or Poultry kept so as to be a nuisance	—	3	10	15	9	37	15
Accumulations of Garbage or Rubbish	765	210	183	470	276	1,904	1,680
Smells from Decaying Animal Matter or other cause	15	17	13	20	5	70	65
Stagnant Water	7	16	14	15	49	101	84
Premises infested with Rats or other vermin	203	214	406	87	86	996	901
Sink accommodation and Water Supply required... ..	—	—	—	—	—	—	2
Water-Closet accommodation required	—	—	1	—	—	1	6
Water Storage Cisterns dirty, uncovered, or unventilated ...	177	520	49	365	6	1,117	998
Water Supply Pipes defective—tenants without water	87	65	38	82	172	444	438

TABLE XXIII.—*Continued.*OPERATIONS OF SANITARY SECTION—*Continued.*

	Central.	Northern.	Eastern.	South-Eastern.	South-Western.	City.	
						1937.	1936.
Pit Shaft without adequate protection	—	—	—	—	—	—	1
Reports to Gas Manager	7	—	—	1	—	8	16
„ Master of Works	543	334	374	477	791	2,519	3,003
„ Superintendent of Cleansing	2	6	19	4	34	65	107
„ Water Engineer	643	290	424	323	469	2,149	2,415
Prosecutions—Sheriff Court	—	1	—	1	1	3	2
„ Police Court	11	2	2	3	18	36	16
Number Successful	10	3	2	4	17	36	18
Amount of Fines	£1 15/6	£2 1/-	7/6	£5 18/-	£3 6/-	£13 8/-	£4 17/6
Number of Rotation Cards for Cleansing of Common Stairs, Lobbies, and W.C.'s served on Tenants	2,078	5,889	2,036	2,038	3,071	15,112	13,226
1. (b) Drain Testing.							
Number of Applications for satisfaction of Dean of Guild Court	362	573	132	433	920	2,420	2,297
Number of first Applications to old Tenements or Systems	143	9	167	12	18	349	314
Number of these found more or less defective	120	8	156	12	11	307	262
Subsequent applications to old Tenements or Systems	156	7	137	14	18	332	357
2. Common Lodging Houses.							
Number measured and registered	2	—	—	—	—	2	—
Total number now on register	13	5	9	2	6	35	35
With accommodation for	2,857	1,649	2,585½	780	1,529	9,400½	9,201
Number of inspections by day	199	77	196	28	243	743	750
Number of inspections by night	—	—	2	—	12	14	26
Number of irregularities	49	6	15	—	51	121	141
Number of prosecutions	—	—	—	—	—	—	—
3. Boarding Houses for Emigrants and Seamen.							
Number measured and registered	—	—	—	—	—	—	—
Total number now on register	2	—	—	—	—	2	3
With accommodation for	190	—	—	—	—	190	110
Number of inspections by day	4	—	—	—	—	4	14
Number of inspections by night	—	—	—	—	—	—	2
Number of irregularities	—	—	—	—	—	—	—
Number of prosecutions	—	—	—	—	—	—	—

TABLE XXIII.—Continued.

OPERATIONS OF SANITARY SECTION—Continued.

	Central.	Northern.	Eastern.	South-Eastern.	South-Western.	City.	
						1937.	1936.
4. Houses-Let-in-Lodgings.							
Number measured and registered	60	—	—	—	29	89	34
Total number now on register ...	98	4	3	7	51	163	97
Number of inspections by day ...	680	80	—	2	369	1,131	494
Number of inspections by night	—	—	—	—	34	34	30
Number of irregularities ...	2	—	—	—	3	5	8
Number of prosecutions ...	—	—	—	—	—	—	—
5. Farmed-out Houses.							
Number measured and registered	—	—	—	—	—	—	—
Total number now on register ...	269	24	98	—	—	391	457
Number of inspections by day ...	4,318	197	1,430	—	—	5,945	5,452
Number of inspections by night	—	—	—	—	—	—	24
Number of irregularities ...	724	5	32	—	—	761	1,047
Number of prosecutions ...	—	—	—	—	—	—	—
Amount of fine ...	—	—	—	—	—	—	—
6. Ticketed Houses.							
Number ticketed for first time ...	—	—	—	—	—	—	—
Total number now on register ...	1,412	2,449	1,682	1,263	822	7,628	8,371
Number of visits by day ...	—	1,193	—	—	—	1,193	5,337
Number of inspections by night	—	—	—	—	—	—	41
Number of cases of Over-crowding found and warned ...	—	—	—	—	—	—	—
Number of prosecutions ...	—	—	—	—	—	—	—
7. Tents and Vans.							
Number of inspections ...	107	377	592	—	53	1,129	834
Number of irregularities ...	—	—	3	—	—	3	2
Number of prosecutions ...	—	—	—	—	—	—	—
8 Factory Bakehouses.							
Number measured and registered	4	7	1	1	—	13	13
Total number now on register ...	61	39	43	44	24	211	213
Number of inspections ...	280	199	284	593	126	1,482	1,488
Number dirty ...	38	33	9	13	12	105	108
Number Overcrowded ...	—	—	—	—	—	—	—
Number defective in light or ventilation ...	—	—	—	—	—	—	—
Number with sanitary conveniences required ...	—	—	—	—	—	—	—
Number with sanitary fittings choked or defective ...	1	—	8	4	4	17	1
Number of other nuisances ...	10	7	7	27	11	62	6
Number of prosecutions ...	—	—	—	1	—	1	—

TABLE XXIII.—*Continued.*OPERATIONS OF SANITARY SECTION—*Continued.*

	Central.	Northern.	Eastern.	South-Eastern.	South-Western.	City.	
9. Workshop Bakehouses.						1937.	1936.
Number measured and registered	4	7	8	3	1	23	45
Total number now on register ...	60	51	66	103	26	306	302
Number of inspections ...	276	92	225	465	46	1,104	1,528
Number dirty ...	36	12	19	19	4	90	105
Number overcrowded ...	—	—	—	—	—	—	—
Number defective in light or ventilation ...	—	—	—	—	—	—	1
Number with sanitary conveniences required ...	—	—	—	—	—	—	—
Number with sanitary fittings choked or defective ...	2	—	—	1	—	3	3
Number of other nuisances ...	8	8	1	12	2	31	38
Number of prosecutions ...	—	—	—	—	—	—	—
10. Other Workshops.							
Number measured and registered	68	28	30	25	4	155	167
Total number now on register ...	904	405	265	414	267	2,255	2,349
Number of inspections ...	4,823	640	1,223	1,996	296	8,978	10,815
Number dirty ...	87	10	15	48	—	160	167
Number overcrowded ...	—	—	—	—	—	—	—
Number defective in light or ventilation ...	3	—	—	2	—	5	14
Number with sanitary conveniences required ...	3	—	—	—	—	3	5
Number with sanitary fittings choked or defective ...	70	—	—	5	1	76	58
Number of other nuisances ...	91	3	10	56	5	165	180
Number of prosecutions ...	—	—	—	—	—	—	—
11. Workplaces.							
Number measured and registered	12	3	15	4	4	38	64
Total number now on register ...	385	47	138	101	159	830	650
Number of inspections ...	1,774	252	855	804	118	3,803	3,691
Number dirty ...	73	19	9	19	3	123	154
Number overcrowded ...	—	—	—	—	—	—	—
Number defective in light or ventilation ...	3	1	—	—	—	4	3
Number with sanitary conveniences required ...	—	—	—	—	—	—	2
Number with sanitary fittings choked or defective ...	16	2	2	4	1	25	16
Number of other nuisances ...	43	12	8	31	3	97	85
Number of prosecutions ...	—	—	—	—	—	—	—
12. Shops.							
Number of inspections ...	261	967	292	566	619	2,705	1,768
Number dirty ...	8	7	3	1	—	19	13
Number defective in ventilation, temperature or lighting ...	5	84	34	17	54	194	—
Number with sanitary conveniences required ...	2	8	8	2	1	21	2
Number with washing facilities required ...	—	—	—	—	—	—	—
Number with sanitary fittings choked or defective ...	26	9	11	12	22	80	106
Number of other nuisances ...	23	8	13	6	3	53	59

TABLE XXIII.—*Continued.*OPERATIONS OF SANITARY SECTION—*Continued.*

	Central.	Northern.	Eastern.	South-Eastern.	South-Western.	City.	
						1937.	1936.
13. Homeworkers' Dwellings.							
Total number now on register ...	42	37	42	53	32	206	204
Number of inspections ...	32	66	101	222	23	444	472
Number found dirty ...	—	—	—	—	—	—	—
14. Piggeries.							
Total number now on register ...	6	19	6	1	1	33	37
Number of inspections ...	26	138	75	8	5	252	254
Number found dirty ...	2	32	2	1	—	37	35
Number of other nuisances ...	—	—	9	—	—	9	6
Number of prosecutions ...	—	—	—	—	—	—	—
15. Offensive Trades.							
Total number now on register ...	5	12	44	—	8	69	69
Number of inspections ...	11	56	944	—	29	1,040	1,785
Number of irregularities ...	—	1	2	—	—	3	11
Number of prosecutions ...	—	—	—	—	—	—	—
16. Rag Flock Act, 1911.							
Total number of visits ...	—	2	—	—	14	16	55
Samples submitted for analysis ...	—	—	—	—	3	3	14
Certified not to conform to standard ...	—	—	—	—	—	—	4
Number of prosecutions ...	—	—	—	—	—	—	3
Number of convictions ...	—	—	—	—	—	—	2
Amount of fines ...	—	—	—	—	—	—	£3
17. Broker's Premises.							
Total number of visits ...	34	63	102	95	23	317	255
18. Cemeteries.							
Total number of visits ...	—	24	44	24	10	102	92

TABLE XXIII.—*Continued.*OPERATIONS OF SANITARY SECTION—*Continued.*

	Central.	Northern.	Eastern.	South-Eastern.	South-Western.	City.	
						1937.	1936.
19. Infectious Diseases, &c.							
Infectious Diseases, visits ...	22,773	24,832	18,436	13,044	12,268	91,353	112,300
Pre-admissions, Country Homes, visits ...	31	82	58	25	104	300	485
Vaccination visits ...	65	661	776	561	652	2,715	2,077
Institutional census ...	—	—	—	13	—	13	5
Air Raid Precautions visits ...	471	1,051	602	9,970	326	12,420	—
20. Housing Acts.							
Total number of visits ...	4,027	6,288	3,969	4,366	4,587	23,237	24,680
21. Work of Female Inspectors.							
Under the Glasgow Corporation (Police) Order, 1904—							
(a) Verminous Children.							
Number of visits to schools ...	159	199	505	219	246	1,328	1,409
Number of children submitted for inspection ...	3,550	3,066	10,531	1,947	5,773	24,867	26,273
Number of children found infested ...	3	17	183	182	134	519	545
Number of children found infested ...	384	1,016	1,697	66	864	4,027	4,259
Number of children found with fleas ...	76	79	137	25	30	347	348
Number of children found dirty ...	61	121	458	118	67	825	778
Number of written notices ...	3	17	183	390	231	824	825
Number of children cleaned by Guardians ...	137	913	2,329	290	1,006	4,675	5,186
Number of children cleaned by officers ...	—	—	—	—	—	—	2
(b) Homes of Verminous Children.							
Number of houses inspected ...	1,510	884	1,664	307	1,083	5,448	5,530
Number of houses in which lodgers were found ...	98	1	1	5	107	212	191
Number of houses found dirty ...	1	18	15	32	1	67	104
Number of houses with dirty bedding ...	1	14	19	29	2	65	99
Number of written notices ...	—	—	8	—	3	11	50
Number of re-inspections ...	1	115	350	47	3	516	757
Number of houses cleaned ...	1	19	20	32	1	73	96
Number of bedding cleaned ...	1	11	18	29	2	61	90

TABLE XXIII.—*Continued.*OPERATIONS OF SANITARY SECTION—*Continued.*

	Central.	Northern.	Eastern.	South-Eastern.	South-Western.	City.	
						1937.	1936.
(c) House-to-House Visitation.							
Number of houses visited ...	3,719	824	101	939	664	6,247	8,689
Number of houses in which lodgers were found ...	181	6	2	61	38	288	309
Number of houses found dirty	41	17	13	18	1	90	142
Number of houses with dirty bedding ...	12	11	5	10	1	39	87
Number of written notices ...	—	—	—	1	2	3	13
Number of houses—Re-visits ...	88	128	12	167	1	396	548
Number of houses found cleaned ...	31	28	9	18	1	87	169
Number of Bedding found cleaned ...	12	9	5	11	1	38	81
(d) Re-housing Scheme Visitation.							
Number of houses visited ...	2,305	24,385	23,226	6,381	6,941	63,238	58,405
Number of houses in which lodgers were found ...	246	625	639	6	1	1,517	1,301
Number of houses found clean	2,233	15,696	13,580	6,041	6,299	43,849	41,239
Number of houses found fair ...	67	8,228	8,310	222	640	17,467	15,220
Number of houses found unsatisfactory ...	5	450	1,183	94	—	1,732	1,803
Number of houses found dirty...	—	11	153	24	2	190	146
Number of houses with dirty bedding ...	—	1	43	9	1	54	90
Number of written notices ...	—	—	12	1	3	16	59
Number of re-visits ...	14	1,098	1,581	545	26	3,264	3,428
Number of houses found cleaned ...	10	436	1,266	118	11	1,841	1,785
Number of bedding found cleaned ...	1	10	47	6	1	65	101
(e) Other Work.							
Number of nuisances reported by Female Inspectors ...	—	6	244	432	11	693	754
Number of infectious disease cases reported by Female Inspectors ...	—	—	—	9	—	9	20

TABLE XXIV.—GLASGOW.—POPULATION; BIRTHS AND DEATHS; BIRTH-RATES AND DEATH-RATES PER 1,000; ALSO DEATHS UNDER 1 YEAR, AND DEATH-RATES PER 1,000 BIRTHS SINCE 1890.

Year.	Population.	Births.	Deaths.	Birth-rate per 1,000.	Death-rate per 1,000.	Deaths under 1 Year	
						Number	Rate per 1,000 Births.
1890 ...	561,447	19,279	13,374	34·3	23·8	2,880	149
1891 ...	567,143	19,857	14,324	35·0	25·3	2,946	148
1892 ...	669,059*	22,815	15,218	34·1	22·7	3,168	139
1893 ...	677,883	23,173	15,798	34·2	23·3	3,649	157
1894 ...	686,820	22,644	13,673	34·0	19·9	2,937	130
1895 ...	695,876	22,803	16,344	32·8	23·5	3,538	155
1896 ...	705,052	24,029	14,385	34·1	20·4	3,278	136
1897 ...	714,919	23,880	15,727	33·4	22·0	3,826	160
1898 ...	724,349	24,262	15,333	33·5	21·2	3,792	156
1899 ...	733,903	24,249	15,828	33·0	21·6	3,696	152
1900 ...	743,969	24,362	16,393	32·7	22·0	3,778	153
1901 ...	761,925	24,206	16,197	31·8	21·2	3,607	149
1902 ...	762,789	24,722	15,532	32·4	20·4	3,206	129
1903 ...	763,654	25,135	15,073	32·9	19·7	3,663	146
1904 ...	764,521	24,754	15,414	32·4	20·2	3,606	146
1905 ...	765,389	24,316	14,460	31·8	18·9	3,195	131
1906 ...	780,192*	24,560	14,889	31·5	19·1	3,223	131
1907 ...	781,080	24,006	15,659	30·7	20·0	3,116	130
1908 ...	781,969	23,915	15,265	30·6	19·5	3,284	137
1909 ...	782,860	23,140	15,242	29·6	19·5	3,073	133
1910 ...	783,785	22,222	13,395	28·4	17·1	2,694	121
1911 ...	784,680	21,755	13,899	27·7	17·7	3,016	139
1912 ...	785,600	22,044	13,797	28·1	17·6	2,740	124
1913 [‡] ...	1,021,789*	28,688	17,693	28·1	17·3	3,706	129
1914 ...	1,028,440	29,462	17,522	28·6	17·0	3,913	133
1915 ...	1,035,091	27,943	20,159	27·0	19·5	4,007	143
1916 ...	1,041,742	27,094	16,601	26·0	15·9	2,996	111
1917 ...	1,048,393	24,030	16,691	22·9	15·9	3,089	129
1918 ...	1,055,044	23,524	18,362	22·3	17·4	2,660	113
1919 ...	1,061,695	25,835	18,237	24·3	17·2	2,937	114
1920 ...	1,068,346	32,626	16,765	31·5	15·7	3,477	107
1921 ...	1,075,000	29,712	15,625	27·6	14·5	3,138	106
1922 ...	1,074,607	28,298	17,850	26·3	16·6	3,401	120
1923 ...	1,074,215	26,710	14,875	24·9	13·8	2,388	89
1924 ...	1,073,822	25,330	16,868	23·6	15·7	3,005	119
1925 ...	1,073,429	25,416	15,336	23·7	14·3	2,591	102
1926 ...	1,090,380*	24,541	15,731	22·7	14·6	2,548	104
1927 ...	1,089,988	23,578	15,439	21·6	14·2	2,527	107
1928 ...	1,089,595	23,649	15,701	21·7	14·4	2,525	107
1929 ...	1,089,202	22,799	17,760	20·9	16·3	2,438	107
1930 ...	1,088,810	23,322	15,455	21·4	14·2	2,355	101
1931 ...	1,088,461	22,926	15,505	21·1	14·2	2,397	105
1932 ...	1,095,263	22,732	16,071	20·8	14·7	2,542	112
1933 ...	1,103,357	21,361	14,747	19·4	13·4	2,061	96
1934 ...	1,115,590	21,822	15,234	19·6	13·7	2,140	98
1935 ...	1,119,414	22,102	15,537	19·7	13·9	2,169	98
1936 ...	1,119,600	22,273	16,406	19·9	14·7	2,429	109
1937 ...	1,119,863	22,176	16,379	19·8	14·6	2,313	104

* Extended City.

‡ Births and Deaths from 1913 are corrected for transfers.

PART II.

FEVER AND TUBERCULOSIS HOSPITALS.

The difficulties that delayed the erection of the new Infectious Disease Hospital at Cowglen, owing to the discovery of old coal workings close to the surface in a portion of the ground, have been surmounted and building operations are proceeding. When this hospital of 350 beds is completed, relief will be afforded to the other fever hospitals which have been running at high pressure for many years. It will be possible to adopt better bed spacing, and it is hoped to add to the cubicle accommodation by the conversion of existing wards.

The new ward of temporary construction at Belvidere Fever Hospital, to contain thirty chicken-pox patients, was in operation during the year and has proved satisfactory. It is proposed to instal a simple X-ray apparatus at this hospital. Knightswood Fever Hospital has now been equipped with X-ray facilities, which have been provided in a portion of the old observation ward. At the remaining fever and tuberculosis hospitals no alterations of structure have taken place. Increasing use is being made of Robroyston Hospital for chest surgery and for the treatment of cases of special difficulty, including genito-urinary tuberculosis. The report on Mearns Kirk Hospital shows that an increasing number of orthopaedic cases are being admitted in co-operation with the Education Health Service.

All the hospitals were working at high pressure during the year. The reports from the individual institutions indicate the investigations that are being made and the manner in which the hospitals are meeting modern medical requirements.

The number of beds in the various fever hospitals is given in Appendix Table XX., which also shows the number of beds available for the treatment of tuberculosis in fever and general hospitals, as well as the number of beds occupied by Glasgow cases in joint hospitals and voluntary institutions, for which payment is made.

Altogether, 15,738 cases of infectious disease and 2,200 cases of tuberculosis were treated to a termination in fever hospitals and sanatoria, as shown in the following abstract. In addition, 316 cases of tuberculosis were treated in the Corporation general hospitals, while 230 cases were treated in sanatoria not belonging to the Local Authority.

Hospital.		Cases of Infectious Disease.	Cases of Tuberculosis.	Together.
Belvidere Fever Hospital	...	5,687	—	5,687
Ruchill Fever Hospital	...	6,068	786	6,854
Shieldhall Fever Hospital	...	1,197	—	1,197
Knightswood Fever Hospital	...	1,709	262	1,971
Robroyston Hospital	...	783	459	1,242
Mearns Kirk Hospital	...	—	*509	509
Bellefield Sanatorium	...	—	180	180
Baird Street Hospital	...	198	—	198
Lightburn Hospital	...	31	—	31
Darnley Hospital...	...	3	1	4
Blawarthill Joint Hospital	...	62	3	65
		15,738	2,200	17,938

* Includes 43 Orthopaedic cases.

The tables which follow give (1) the age and sex distribution of cases of infectious diseases dismissed well or who died in the fever hospitals; (2) a statement of altered diagnosis reported during the year 1937. Out of 7,514 male patients, 772 died, while of 8,224 female patients, 598 died, representing mortality rates of 10.3 per cent. and 7.3 per cent. respectively.

GLASGOW.—STATEMENT SHOWING AGE AND SEX DISTRIBUTION OF CASES.

		Age.	Typhus Fever.	Enteric Fever.	Paratyphoid Fever.	Continued Fever.	Puerperal Fever.	Puerperal Pyrexia.	Scarlet Fever.	Diphtheria.	Erysipelas.	Cerebro-spinal Fever.	Ophthalmia Neonatorum.	Trachoma.	Encephalitis Lethargica.	Pollencecephalitis.
Cases (including Deaths)—																
Males	...	— 1	—	—	2	—	—	—	10	13	7	15	34	—	—	—
"	...	— 2	—	—	—	—	—	—	99	47	9	5	—	—	—	—
"	...	— 3	—	—	—	—	—	—	174	73	7	4	—	—	—	—
"	...	— 4	—	—	—	—	—	—	237	88	2	4	—	—	—	—
"	...	— 5	—	1	—	—	—	—	271	108	—	2	—	—	—	—
"	...	— 10	—	1	1	—	—	—	961	377	6	11	—	—	1	—
"	...	— 15	—	—	2	—	—	—	328	167	10	5	—	—	—	—
"	...	— 25	—	1	8	—	—	—	177	79	27	5	—	—	1	—
"	...	— 35	—	1	3	—	—	—	46	34	29	3	—	—	—	—
"	...	— 45	—	3	—	—	—	—	27	11	64	3	—	—	1	—
"	...	45+	—	4	—	—	—	—	5	9	190	4	—	—	—	—
Total	...	—	—	11	16	—	—	—	2,335	1,006	351	61	34	—	3	—
Females	...	— 1	—	—	—	—	—	—	12	12	18	16	34	—	—	—
"	...	— 2	—	—	—	—	—	—	104	33	7	3	—	—	—	—
"	...	— 3	—	—	—	—	—	—	204	52	4	4	—	—	—	—
"	...	— 4	—	—	—	—	—	—	250	57	2	2	—	—	—	—
"	...	— 5	—	—	—	—	—	—	254	91	—	—	—	—	—	—
"	...	— 10	—	—	3	—	—	—	1,100	434	8	5	—	—	—	—
"	...	— 15	—	—	1	—	—	—	467	229	16	—	—	—	—	—
"	...	— 25	—	1	8	—	132	27	259	224	44	4	—	—	—	—
"	...	— 35	—	—	9	—	252	48	91	94	54	1	—	—	—	—
"	...	— 45	—	3	4	—	77	18	45	29	62	—	—	—	—	—
"	...	45+	—	2	8	—	1	—	15	24	134	—	—	—	—	—
Total	...	—	—	6	33	—	462	93	2,801	1,279	349	35	34	—	—	—
Deaths—																
Males	...	— 1	—	—	—	—	—	—	—	3	1	10	2	—	—	—
"	...	— 2	—	—	—	—	—	—	1	4	—	3	—	—	—	—
"	...	— 3	—	—	—	—	—	—	4	4	—	1	—	—	—	—
"	...	— 4	—	—	—	—	—	—	3	6	—	2	—	—	—	—
"	...	— 5	—	—	—	—	—	—	—	7	—	—	—	—	—	—
"	...	— 10	—	—	—	—	—	—	3	18	—	8	—	—	—	—
"	...	— 15	—	—	—	—	—	—	1	5	—	4	—	—	—	—
"	...	— 25	—	—	—	—	—	—	2	1	—	3	—	—	—	—
"	...	— 35	—	—	—	—	—	—	3	2	1	2	—	—	—	—
"	...	— 45	—	1	—	—	—	—	—	—	1	3	—	—	1	—
"	...	45+	—	3	—	—	—	—	—	3	11	3	—	—	—	—
Total	...	—	—	4	—	—	—	—	17	53	14	39	2	—	1	—
Females	...	— 1	—	—	—	—	—	—	—	1	4	11	4	—	—	—
"	...	— 2	—	—	—	—	—	—	4	4	—	1	—	—	—	—
"	...	— 3	—	—	—	—	—	—	4	5	—	2	—	—	—	—
"	...	— 4	—	—	—	—	—	—	3	3	—	—	—	—	—	—
"	...	— 5	—	—	—	—	—	—	1	7	—	—	—	—	—	—
"	...	— 10	—	—	—	—	—	—	3	24	—	—	—	—	—	—
"	...	— 15	—	—	—	—	—	—	1	6	—	—	—	—	—	—
"	...	— 25	—	—	—	10	1	2	—	—	—	1	—	—	—	—
"	...	— 35	—	—	2	—	26	—	—	—	—	—	—	—	—	—
"	...	— 45	—	—	1	—	14	4	1	1	1	—	—	—	—	—
"	...	45+	—	—	1	—	—	—	—	1	12	—	—	—	—	—
Total	...	—	—	—	4	—	50	5	19	52	17	15	4	—	—	—

DISMISSED FROM FEVER HOSPITALS, AND DEATHS DURING THE YEAR 1937.

Poliomyelitis.	Acute Primary Pneumonia.	Acute Influenzal Pneumonia.	Malaria.	Dysentery.	Infective Jaundice.	Measles.	German Measles.	Whooping-cough.	Chicken-pox.	Influenza.	Mumps.	Veneral Disease.	Periphagus Neonatorum.	Abortions.	Anthrax.	No apparent Disease.	Others.	TOTAL.
— 247	1	—	3	—	5	—	83	13	—	1	2	16	—	—	—	4	114	570
— 232	3	—	17	—	23	—	90	11	1	—	—	—	—	—	—	2	79	618
2 149	1	—	14	—	15	1	56	8	—	—	—	—	—	—	—	2	47	553
— 91	1	—	6	—	12	1	47	8	—	—	2	—	—	—	—	4	38	541
2 76	—	—	1	—	3	—	29	11	—	2	—	—	—	—	—	2	31	539
1 254	3	—	8	—	15	6	43	32	6	3	1	—	—	—	—	4	102	1,836
— 83	7	—	4	—	2	1	—	2	5	2	1	—	—	—	—	1	56	676
— 216	27	—	2	—	3	—	—	2	8	1	38	—	—	—	—	—	87	682
— 134	18	2	6	—	4	1	—	1	10	1	77	—	—	—	1	1	58	430
— 158	18	1	10	—	1	—	—	—	10	—	39	—	—	—	—	1	41	388
— 287	48	—	10	—	—	—	—	—	3	—	29	—	—	—	1	—	91	681
5 1,927	127	3	81	—	83	10	348	88	43	10	189	16	—	—	2	21	744	7,514
— 204	2	—	2	—	9	—	108	8	—	1	4	18	—	—	—	4	83	535
1 219	1	—	10	—	14	—	115	10	—	—	1	—	—	—	—	4	69	591
1 116	1	—	6	—	10	1	65	8	—	—	3	—	—	—	—	1	44	520
— 69	—	—	4	—	10	—	44	7	—	3	3	—	—	—	—	2	49	502
— 54	—	—	1	—	6	—	40	5	—	—	2	—	—	—	—	—	32	485
— 149	5	—	6	—	15	4	31	26	4	2	6	—	—	—	—	3	98	1,899
— 58	5	—	—	—	2	3	1	3	3	—	3	—	—	—	—	1	56	848
— 81	22	—	18	—	7	3	—	2	9	3	20	—	36	—	—	1	199	1,100
1 85	15	—	7	—	1	—	—	—	8	—	7	—	76	—	—	2	123	874
— 58	20	—	4	—	—	—	—	—	4	—	6	—	41	—	—	1	74	446
— 119	25	—	7	—	—	—	—	—	6	—	1	—	1	—	—	1	80	424
3 1,212	96	—	65	—	74	11	404	69	34	9	56	18	154	—	—	20	907	8,224
— 64	—	—	—	—	1	—	34	—	—	1	1	5	—	—	—	—	14	136
— 40	—	—	1	—	9	—	24	1	1	—	—	—	—	—	—	—	7	91
— 6	—	—	—	—	2	—	7	—	—	—	—	—	—	—	—	—	4	28
— 1	—	—	1	—	—	—	7	—	—	—	—	—	—	—	—	—	4	24
— 4	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	3	16
— 11	—	—	—	—	1	—	3	—	—	—	—	—	—	—	—	—	5	49
— 3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8	21
— 14	4	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	12	37
— 31	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	49
— 58	5	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	5	76
— 171	26	—	1	—	—	—	—	—	1	—	3	—	—	—	—	—	23	245
— 403	39	—	4	—	13	—	77	1	2	1	6	5	—	—	—	—	91	772
— 58	2	—	—	—	2	—	46	—	—	—	1	4	—	—	—	—	7	140
— 39	—	—	—	—	2	—	33	—	—	—	—	—	—	—	—	—	6	89
— 10	—	—	—	—	—	—	8	—	—	—	—	—	—	—	—	—	4	33
— 6	—	—	—	—	1	—	7	—	—	—	—	—	—	—	—	—	1	21
— 1	—	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—	1	14
— 7	—	—	—	—	—	—	2	1	—	—	—	—	—	—	—	—	11	48
— 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9	17
— 13	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14	43
— 18	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	4	52
— 16	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	47
— 54	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17	94
— 223	19	—	1	—	5	—	100	1	—	—	1	4	—	—	—	—	78	598

GLASGOW.—TABLE SHOWING ALTERATIONS IN DIAGNOSIS
ORIGINALLY CERTIFIED AS

	Typhus Fever.	Enteric Fever.	Paratyphoid Fever.	Continued and Undefined Fever.	Puerperal Fever.	Puerperal Fever and Other Diseases.	Puerperal Pyrexia.	Scarlet Fever.	Scarlet Fever and Other Diseases.	Diphtheria.	Diphtheria and Other Diseases.	Erysipelas.	Erysipelas and Other Diseases.
Enteric Fever	—	—	—	2	—	—	—	—	—	—	—	—	—
Enteric Fever and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
Paratyphoid B	—	—	—	4	—	—	—	1	—	—	—	—	—
Paratyphoid B and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Pyrexia	—	—	—	—	—	—	—	—	—	—	—	—	—
Scarlet Fever	—	—	—	—	—	—	—	—	12	40	—	1	—
Scarlet Fever and Other Diseases	—	—	—	—	—	—	—	21	—	—	1	—	—
Diphtheria	—	—	—	—	—	—	—	7	—	—	2	—	—
Diphtheria and Other Diseases	—	—	—	—	—	—	—	—	—	14	—	—	—
Erysipelas	—	—	—	1	—	—	—	3	—	—	—	—	—
Erysipelas and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebro-spinal Fever	—	—	—	1	—	—	—	—	—	—	—	—	—
Cerebro-spinal Fever and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
Encephalitis Lethargica	—	—	—	—	—	—	—	—	—	—	—	—	—
Polioencephalitis	—	—	—	—	—	—	—	—	—	—	—	—	—
Poliomyelitis	—	—	—	—	—	—	—	—	—	—	—	—	—
Pneumonia	—	4	—	3	—	—	—	9	—	8	1	—	—
Pneumonia and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
Influenzal Pneumonia	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaria	—	—	—	1	—	—	—	—	—	—	—	—	—
Dysentery... ..	—	2	1	—	—	—	—	—	—	—	—	—	—
Dysentery and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	—	—	5	—	1	—	—	—
Measles and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
German Measles	—	—	—	—	—	—	—	9	—	—	—	—	—
German Measles and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
Whooping-cough	—	—	—	—	—	—	—	1	—	6	—	—	—
Whooping-cough and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
Chicken-pox	—	—	—	—	—	—	—	2	—	—	—	—	—
Chicken-pox and Other Diseases	—	—	—	—	—	—	—	1	—	—	—	—	—
Mumps	—	—	—	—	—	—	—	1	—	1	—	—	—
Influenza	—	5	1	1	—	—	—	2	—	2	—	1	—
Tuberculosis (all forms)	—	—	—	7	—	—	—	—	—	1	—	—	—
Diseases of Nervous System	—	—	—	4	—	—	—	1	—	3	—	6	—
Diseases of Circulatory System	—	1	—	2	1	—	—	3	1	2	—	3	—
Diseases of Respiratory System	—	1	—	8	—	—	—	6	—	45	—	2	—
Diseases of Digestive System	—	16	12	6	1	—	1	132	6	174	6	8	—
Acute and Chronic Nephritis	—	2	—	—	—	—	—	—	—	—	—	—	—
Diseases of Pregnancy and Parturition	—	—	—	—	58	—	14	—	—	—	—	—	—
All Other Diseases	—	2	5	3	1	—	—	30	—	9	—	64	—
No Apparent Disease	—	—	—	—	1	—	1	19	—	3	—	2	—
	—	33	19	43	62	—	16	253	19	309	10	87	—

OF CASES DISMISSED FROM FEVER HOSPITALS DURING 1937.

ORIGINALLY CERTIFIED AS

Cerebro-spinal Fever.	Cerebro-spinal Fever and Other Diseases.	Encephalitis Lethargica.	Polioencephalitis.	Polio- myelitis.	Pneumonia.	Pneumonia and Other Diseases.	Influenzal Pneumonia.	Influenzal Pneumonia and Other Diseases.	Malaria.	Dysentery.	Infective Jaundice.	Measles.	Measles and Other Diseases.	German Measles.	Whooping-cough.	Whooping-cough and Other Diseases.	Chicken-pox.	Chicken-pox and Other Diseases.	Mumps.
1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	—	2	—	—	—	—	—	—	1	—	2	—	—	—	—	—
—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	2	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	—	1	—	—	—	3	—	—	—	2	—	—	1	—	8	—	—	—	—
—	—	—	—	—	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	4	—	—	—	—	1	—	—	1	1	—	—	1	—	—
—	—	—	—	—	—	—	—	—	—	—	—	4	—	—	—	—	—	—	—
3	—	—	—	—	51	—	—	—	—	—	—	—	—	—	—	1	—	—	—
—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	3	—	—	—	—
—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	4	—	—
1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	2	—	—
3	—	—	—	—	42	—	12	—	—	2	—	1	—	1	—	—	—	—	—
1	—	—	—	—	57	—	8	—	—	—	—	—	—	—	7	—	—	—	—
5	—	2	—	—	3	—	1	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	9	1	3	—	—	—	—	—	—	—	—	—	—	—	2
4	—	—	—	—	471	1	19	—	—	—	—	3	—	—	5	—	—	—	—
8	—	—	—	—	63	—	2	—	2	25	—	—	—	—	4	—	—	—	—
1	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	—	—	—	—	30	—	3	—	—	—	—	—	—	—	—	—	5	—	—
2	—	—	—	—	10	—	—	—	—	3	—	—	—	—	—	—	—	—	—
0	—	3	—	1	772	5	48	—	3	33	—	9	2	4	30	1	8	4	2

BELVIDERE FEVER HOSPITAL.

The admissions to hospital for 1937 numbered 5,757, a figure slightly in excess of that of the previous year. Throughout the year the accommodation was almost fully occupied. The great diminution in admissions during the summer months which formerly was a feature, has, during the last few years, been less evident, and during 1936 a comparatively busy summer, interfered to some extent with the annual cleaning of the wards and the holiday arrangements of the staff.

On 1st January there remained from the previous year, 533 patients; 5,687 were treated to a conclusion; 456 died. At the close of the year 603 patients remained in hospital. The general mortality rate was 8 per cent.; 119 or 26 per cent. of the fatal cases were moribund when admitted. The average duration of residence of patients who recovered was 36 days; of those who died 11 days. There were 5 births during the year.

Early in 1937 the last of the old wooden pavilions was removed, and the new pavilion of 30 beds for chicken-pox occupied. It has proved satisfactory, and its equipment is much appreciated by the staff.

Scarlet Fever.—The number of beds allocated for the different diseases naturally varies from year to year with the epidemic variation. Since 1932 the incidence of scarlet fever admissions had been diminishing, but in 1937 there was a sharp increase, and the number of cases treated was 2,104 in contrast to 1,592 in 1936. The disease although mild was slightly more severe in type than in 1936, and the mortality rate rose from 0.4 to 0.7 per cent. There were in all 15 deaths, 3 of the patients being in a moribund condition when admitted. The cause of death in the fatal cases was:—

Toxic Scarlet Fever (haemorrhagic) ...	...	...	1
Septic Scarlet Fever ...	...	...	5
Scarlet Fever and Broncho-pneumonia ...	...	...	3
Scarlet Fever and Endocarditis ...	...	...	3
Scarlet Fever and Endocarditis and Myocarditis ...	...	...	1
Scarlet Fever and Status Lymphaticus ...	...	...	1
Scarlet Fever and sudden Syncope ...	...	...	1

The age groups were:—

-1	-2	-3	-4	-5	-10	-15	-25	-35	-45	45+	Total
—	3	1	4	2	2	—	2	1	—	—	15

Serum treatment was employed in all the severe cases and in most of the moderate cases with satisfactory results. In some of the latter, and most of the mild cases, sulphonamide preparations were employed. These did not appear to influence appreciably the course of the disease nor to diminish the complications. In septic cases sulphonamide treatment was pursued sometimes in conjunction with serum treatment. In a few cases there was definite response to sulphonamide treatment, and in one case of septic scarlatina with mastoiditis and a positive blood culture (*Streptococcus hæmolyticus*) there was a dramatic and maintained improvement.

Ten cases were received suffering coincidently from other diseases; six from chicken-pox, two from whooping-cough, one from diphtheria and one from parotitis. Eleven were in the incubation stages of other infections when admitted; six were incubating chicken-pox, three whooping-cough, one measles, and one parotitis.

Surgical Conditions.—The Consulting Aurist advised on the treatment of all ear conditions both in scarlet fever and other diseases. Thirty-seven mastoid operations were performed. Tonsils and adenoids were removed in eleven cases, mostly for carrier conditions. In the department of general surgery, Mr. Russell attended for forty-nine consultations, and eleven operations were performed.

Diphtheria.—The number of verified cases treated was 845. Last year the number was 809. Last year there were only 25 deaths; this year 45. Thirty-seven per cent. of the fatal cases were received in a moribund condition. The mortality rate was 5.1 per cent. These figures verify the impression that diphtheria is becoming more severe, and the typing of the organism from the moderate and severe cases shews that the gravis type is on the increase. Some of the severe cases of gravis type did not shew the usual response to intensive serum treatment even when administered early. Hitherto failure to respond has mostly been associated with an illness of at least five days' duration. The increase in the number of cases of "gravis" type, although such cases are by no means always associated with severe clinical manifestations, together with the occasional failure of serum response, is probably an indication that the type of diphtheria in Glasgow is changing for the worse, and that the grave types which are common in the South may be finding their way North.

The fatal cases were classified thus:—

Faucial Diphtheria ...	...	...	...	...	...	...	24
Laryngeal Diphtheria ...	...	...	...	...	...	...	3
Membranous Croup and Pneumonia ...	...	...	...	...	...	...	2
Faucial Diphtheria, Ciliary and Palatal Paralysis ...	...	...	...	...	...	...	3
Faucial and Nasal Diphtheria ...	...	...	...	...	...	...	2
Faucial and Laryngeal Diphtheria ...	...	...	...	...	...	...	1
Nasal Diphtheria and Cardiac Failure ...	...	...	...	...	...	...	2
Faucial, Nasal and Palatal Diphtheria ...	...	...	...	...	...	...	1
Faucial, Nasal and Laryngeal Diphtheria ...	...	...	...	...	...	...	1
Faucial Diphtheria, Bronchitis and Cardiac Failure ...	...	...	...	...	...	...	1
Haemorrhagic Diphtheria ...	...	...	...	...	...	...	1
Membranous Croup and Whooping-cough ...	...	...	...	...	...	...	1
Bacteriological Diphtheria, Marasmus and Bronchitis ...	...	...	...	...	...	...	1
Bacteriological Diphtheria, Laryngitis and Pneumonia ...	...	...	...	...	...	...	1
Bacteriological Diphtheria and Endocarditis ...	...	...	...	...	...	...	1
							45

• Age groups:—

-1	-2	-3	-4	-5	-10	-15	-25	-35	-45	45+	Total
3	3	5	2	9	15	4	—	1	—	3	45

Fifteen cases were received suffering coincidently from other diseases; 11 from scarlet fever, 2 from whooping-cough, 1 from chicken-pox, and 1 from dysentery. Seven were incubating other conditions; 4 diphtheria, 2 whooping-cough, and 1 parotitis.

Schick Test.—New recruits to the staff were tested. Among 66 tested 26 positives were found, and these were immunised by two injections of Alum Toxoid.

Pneumonia.—The number of cases treated, 1,258, was practically the same as last year. There were 259 deaths, giving a mortality rate of 20.6 per cent. Sixty-two patients or 23 per cent. of the total deaths were received in a moribund condition. The following table indicates the age incidence and the fatalities in the respective age groups:—

Age	...	...	-1	-2	-3	-4	-5	-10	-15	-25	-35	-45	45+	Total.
Total Treated			172	192	93	55	41	165	66	121	97	82	174	1,258
Total Deaths...			63	34	5	3	2	7	—	7	23	27	88	259

Of the fatal cases 42 per cent. were due to Broncho-Pneumonia and 29 per cent. to Lobar Pneumonia.

Typing was undertaken in a large number of the cases, and in some of these, serum treatment was given with encouraging results. Intensive use of oxygen was again pursued. Twenty-four cases of

pneumonia were on admission found to be suffering from other conditions coincidentally; 16 from whooping-cough, 2 from cerebro-spinal fever, 2 from chicken-pox, 2 from scarlet fever, 1 from diphtheria, and 1 from measles. Four were incubating other infections; 2 chicken-pox, 1 measles, and 1 scarlet fever.

Altered Diagnosis.—Among the cases notified as pneumonia, 257 (approximately 20 per cent.) were found to be suffering from other conditions as follows:—

Bronchitis	...	...	...	...	...	...	...	109
Influenza	...	...	...	...	...	...	...	23
Pleurisy with Effusion	...	...	...	...	...	...	...	19
Phthisis	...	...	...	...	...	...	...	14
Enteritis	...	...	...	...	...	...	...	9
Tonsillitis	...	...	...	...	...	...	...	11
Whooping-cough	...	...	...	...	...	...	...	4
Tuberculous Meningitis	...	...	...	...	...	...	...	4
Cerebro-spinal Fever	...	...	...	...	...	...	...	5
Acute Coryza	...	...	...	...	...	...	...	5
Measles	...	...	...	...	...	...	...	2
Whooping-cough and Pneumonia	...	...	...	...	...	...	...	17
Chicken-pox and Pneumonia	...	...	...	...	...	...	...	2
Scarlet Fever and Pneumonia	...	...	...	...	...	...	...	4
Diphtheria and Pneumonia	...	...	...	...	...	...	...	1
Other affections	...	...	...	...	...	...	...	28
								<hr/> 257 <hr/>

PUERPERAL FEVER AND PUERPERAL PYREXIA.

During the year 198 cases were treated to a conclusion. In four of these the diagnosis was revised to conditions other than puerperal. There were nine deaths, giving a mortality rate of 4.3 per cent. In these, the cause of death was:—

Septic Abortion and Peritonitis	...	...	...	...	...	3
Septic Abortion and Lobar Pneumonia	...	...	...	...	...	2
Puerperal Pyrexia, Broncho-pneumonia	...	...	...	...	...	1
Puerperal Scarlatina	...	...	...	...	...	1
Puerperal Fever, Lobar Pneumonia and Empyema	...	...	...	...	...	1
Puerperal Fever, Hemiplegia, Broncho-pneumonia	...	...	...	...	...	1

In 201 admissions to the wards the ultimate diagnosis was:—
Puerperal Fever, 132; Puerperal Pyrexia, 20; Septic Abortion, 49.

Of these 121 or 60.2 per cent. suffered from complications of the urinary system. In 36 there was bacilluria without obvious pyuria. In 47 bacilluria was associated with well marked pyuria. In 38 pyuria was present but no organisms were found.

The essential lesions in the puerperal pyrexia cases were:—
Broncho Pneumonia, 2; Carditis and Oedema, 1; Phlegmasia Alba Dolens, 1; Debility, 1; Pyelitis, 3; Bacilluria, 3; Retention of Urine, 1; Urethritis, 1; Mastitis, 1—20.

Seventy cases notified as Puerperal Pyrexia proved to be Puerperal Fever, but only five notified as Puerperal Fever were allocated to the Puerperal Pyrexia class.

There were 62 operations during the year, 48 being under general anaesthesia—33 operations were for the relief of suppurative mastitis. Dilation and curettage was carried out in 26 cases. There was one laparotomy, one case of cellulitis of the hip, and one blood transfusion.

Clinical Note.—The high incidence of infections of the urinary tract has been noted, but response to treatment was very satisfactory. Sulphanilamide treatment successfully brought about a rapid remission of symptoms, and frequently sterilisation of the urine. When response to sulphanilamide was slow or negligible, sodium mandelate treatment usually proved effective.

Whooping-cough.—One hundred and two patients were treated. Four were received in a moribund condition. There were twenty-four deaths, a mortality of 19 per cent. Broncho-pneumonia associated either with convulsions or enteritis was the most frequent cause of death. Vaccine treatment was pursued in suitable cases, but in whooping-cough patients are rarely received in a sufficiently early stage for vaccine treatment.

Measles.—Only twelve cases of measles were dealt with.

Rubella.—Nine cases were treated. Eight were received under other certifications; six as scarlet fever and two as measles.

Enteric Fever Group.—In 1936, 105 cases were treated; in 1937 only 25. Twenty were examples of Paratyphoid B.; four of B. Typhosus infection. There was in addition one example of Bacteriological B. Typhosus infection in which there was no history of any clinical disturbance. In the Paratyphoid B. group two became carriers. Four deaths occurred as follows:—

- 44 years—Paratyphoid B. Myocarditis and Tumour of rib.
- 64 years—Paratyphoid B. Cardiac degeneration and Gallstones.
- 25 years—Paratyphoid B. and Lobar Pneumonia.
- 34 years—Paratyphoid B. and Intestinal Haemorrhage.

Dysentery.—Thirty-one cases of dysentery were treated. Two deaths occurred; one from syncope and one from pneumonia before classification was possible. All the twenty-nine patients who recovered were of bacillary type.

Cerebro-Spinal Fever.—One hundred and thirteen cases were certified as cerebro-spinal fever. In 42 of these the diagnosis was confirmed. Of the others 20 were found to be suffering from tuberculous meningitis. The diagnosis in the remainder was as follows:—Pneumonia, 11; Pneumococcal Meningitis, 4; Enteritis, 5; Bronchitis, 10; Tonsilitis, 5; Cerebral Hæmorrhage, 3; Influenza, 3; other affections, 10.

The confirmed cases were mostly in young children, and the mortality was 60 per cent.

Chicken-pox.—One hundred and forty-nine cases were dealt with during the year. As hitherto, many of these were received from other hospitals and were suffering coincidently from other diseases. Four deaths occurred.

Venereal Disease.—During the year, 183 patients received indoor treatment. There were 5 deaths certified as follows:—

1. Myocarditis	...	...	...	...	...	20 years.
2. Arsenical Dermatitis and Colitis	...	...	...	...	...	38 years.
3. Septicaemia, Urethral Strictures and Cystitis	...	...	...	...	...	52 years.
4. Arsenical Dermatitis, Subacute Nephritis	...	...	...	...	...	45 years.
5. Mitral Incompetence and Myocarditis	...	...	...	...	...	50 years.

Clinically the cases were classified thus:—Primary Syphilis, 4; Secondary Syphilis, 18; Latent Syphilis, 11; Genital, 4; all other stages, 2; Gonorrhœa Acute, 87; Gonorrhœa Chronic, 6; Soft Chancre, 41; Non-Specific Venereal Infection, 9; Non-Venereal Disease, 2—Total 184.

Forty-one of the above were new cases.

The average duration of residence of those who recovered was 34 days; of fatal cases 27 days.

PATIENTS BROUGHT TO THE HOSPITAL FOR EXAMINATION AND ADVICE.

Four hundred and sixty-four children were medically examined. One hundred and fifteen or 25 per cent. were admitted, the remainder were advised and sent home.

Tuberculosis.—Apart from the 20 cases of Tuberculous Meningitis already mentioned, 23 cases of Pulmonary Tuberculosis were detected and notified. These were mostly from the Pneumonia wards; 11 of them were transferred direct to Sanatoria.

· THOMAS ARCHIBALD,
Physician Superintendent.

BELVIDERE HOSPITAL.—STATEMENT OF CASES TREATED ACCORDING TO SEX.

DATA BASED ON DISMISSALS AND DEATHS FOR YEAR 1937.

	Admitted.		Dismissed.		Died.		Remaining in Hospital, 31st Dec., 1937.		Mortality, per cent.		Average Residence (days).		Deaths.		Ages (Dismissed and Died).				Diagnosis.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Males.	Females.	Males.	Females.		
Typhus ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric Fever ...	—	6	—	5	—	—	—	1	—	—	—	53	—	—	—	—	—	—	—	5
Paratyphoid Fever ...	—	24	—	20	—	4	—	1	—	16.7	—	46	—	20	—	—	2	22	12	17
Continued and Undefined Fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15
Puerperal Fever ...	—	179	—	167	—	7	—	15	—	—	—	33	—	10	—	—	—	174	5	5
Smallpox ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Scarlet Fever ...	1,000	1,147	980	1,124	8	7	106	115	0.8	0.6	37	36	24	29	347	542	99	338	635	158
Diphtheria and Mem. Croup ...	389	536	362	483	22	23	62	78	5.7	4.5	44	43	8	9	136	208	40	93	265	148
Erysipelas ...	1	4	1	3	—	1	—	—	—	25.0	8.3	29	—	1	1	—	—	1	—	3
Cholera ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebro-spinal Fever ...	30	13	7	8	20	7	3	—	74.1	46.7	63	73	13	28	9	8	10	14	—	1
Trachoma ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Encephalitis Lethargica ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Acute Poliioencephalitis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Acute Poliomyelitis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Acute Primary Pneumonia ...	748	425	592	351	150	95	81	34	20.2	21.3	33	37	10	11	307	142	293	242	80	124
Acute Influenzal Pneumonia ...	41	31	33	23	8	6	1	2	19.5	20.7	29	44	8	6	3	5	33	1	4	24
Malaria ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dysentery ...	16	20	14	15	2	—	1	5	12.5	—	39	18	13	—	14	1	1	7	2	6
Relapsing Fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pulmonary Tuberculosis ...	10	8	9	7	1	—	1	1	10.0	—	26	31	38	—	1	—	9	—	1	6
Other forms of Tuberculosis ...	19	11	—	1	18	10	1	—	100.0	90.9	—	44	7	10	10	3	5	7	2	2
Measles ...	24	19	5	7	1	1	18	11	16.7	12.5	31	24	1	1	4	1	1	5	2	1
German Measles ...	4	5	4	5	—	—	—	—	—	—	11	11	—	—	3	1	1	4	—	—
Whooping-cough ...	48	55	51	51	12	12	—	—	19.0	19.0	61	62	17	9	53	10	—	57	6	6
Chicken-pox ...	85	67	84	65	1	1	4	6	1.2	1.5	25	28	1	1	49	34	2	36	28	2
Mumps ...	1	—	1	—	—	—	—	—	—	—	22	—	—	—	1	—	183	—	—	—
Veneral Diseases ...	177	—	178	—	5	—	10	—	2.7	—	34	—	27	—	—	—	—	—	—	—
Babies with Mothers ...	3	2	3	1	—	—	—	—	33.3	—	27	33	1	—	3	—	—	3	1	—
No apparent Disease ...	—	—	—	—	—	—	—	—	—	—	—	15	—	—	—	—	—	—	—	—
Others ...	223	300	208	277	13	16	20	21	5.9	5.5	26	24	10	9	115	49	57	118	67	108
Influenza ...	14	21	13	19	1	—	2	7.1	6.9	—	18	19	16	—	1	6	7	—	4	15
Puerperal Pyrexia ...	—	—	—	27	—	2	—	—	—	6.9	—	35	—	7	—	—	—	—	1	29
Impetigo ...	—	1	—	1	—	—	—	—	—	—	—	45	—	—	—	—	—	—	—	—
Mothers with Babies ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pemphigus Neonatorum ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified (Staff) ...	5	14	5	16	1	—	1	16.7	—	—	18	26	2	—	—	6	—	—	—	16

RUCHILL FEVER AND TUBERCULOSIS HOSPITAL.

During the year 1937 the number of cases treated to a conclusion was 6,068. This total is only 68 less than the previous year, which itself was high because of the prevalence of measles; the fall in the number of measles cases was offset by a large increase in scarlet fever admissions, a fact that accounts for the comparatively small decline in the number of patients treated. The general mortality rate was 9.5 per cent., slightly lower than last year but about the normal experience.

In scarlet fever there was an increase in numbers amounting to 460, severely taxing the accommodation. The disease continued to be of a mild type and the mortality rate was 0.6 per cent. against 0.8 per cent. last year. An investigation into the usefulness of the sulphonamide group of drugs in scarlet fever was started during the latter part of the year. The indication from the results obtained suggested that little effect was produced in this disease except in the septic type.

In the enterica group there were 11 cases of typhosus infections, a drop of seven from last year. Among these were four deaths, two from perforation and one from toxæmia. The fourth death occurred in a patient who was the subject of syringomyelia and was not directly ascribable to the enteric infection. Paratyphoid cases showed a drop from 99 in 1936 to 17. There were no fatalities from this disease.

Diphtheria patients numbered 732, an increase of 78 over the previous year. The mortality rate of all cases was 4.3 per cent. but this was reduced to 3.4 per cent. on excluding deaths following tracheotomy in laryngeal cases. These figures contrast with the unusual experience of last year when the respective percentages were 1.6 and 1.0. Towards the end of the year the type of case admitted became much more serious and the numbers of deaths in the last three months were respectively 3, 4 and 7. The deaths in the two latter months equalled those for the whole of 1936.

Delay in coming under treatment was undoubtedly responsible for the fatal result in many of the cases but there were others in which the response to serum treatment was not what might have

been expected from previous experience. Another noteworthy point in the diphtheria admissions was a definite increase in the number of laryngeal cases.

During the year, 686 cases of erysipelas were treated, an increase of 42 over the previous year. The mortality rate fell from 7.0 per cent. to 4.3 per cent. This figure is only slightly over half the average for the past seven years. The sulphonamide drugs have been continued as treatment in this disease and the results obtained undoubtedly indicated their usefulness.

The noteworthy drop in the mortality rate probably owed its occurrence to this method of treatment. The striking fact also emerged that the average stay in hospital was definitely reduced. During the period under review the average number of days in hospital was 17 compared with 23 days, the average for the past seven years. This is an important consideration both from the economic and accommodation points of view. The full details of the investigation have now been published.

There were 47 cases of cerebro-spinal fever, an increase of nine over last year's figure and the mortality rate was exactly the same, namely 44.7 per cent. Poliomyelitis has been practically non-existent during the year so far as admissions were concerned. Eight cases remaining from the previous year were dismissed for further treatment at other institutions.

Acute primary pneumonia cases dropped by 211 to 989. The mortality rate was 21.6 per cent. which is about the figure usually experienced. There was an increase of 47 cases of dysentery to make a total of 85. There was one death. Only 89 cases of measles were treated and the mortality rate was 15.7 per cent. Whooping-cough cases numbered 547, an increase of 325 over last year and the available accommodation was severely taxed. The mortality rate was the same as last year, namely 24.3 per cent. a not unusual figure in hospitalised cases.

The Visiting Aural Surgeon saw 168 new and 97 old cases during the year and performed 61 operations. In addition he attended 15 members of the nursing staff and operated on five of them.

Dr. Baxter, the Medical Officer in charge of the Tuberculosis Section of the hospital, has submitted the following report of the work done there:—The accommodation for cases of tuberculosis and

observation cases of diseases of the chest was severely taxed during the whole of 1937 and for several months in the summer 16 extra beds were made available to deal with the large number of female cases on the urgent waiting list. The number of patients treated in 1937 was 787 an increase of 23 cases over the figure for 1936 and the average stay in hospital per patient was again just under four months. The proportion of deaths to the total number of cases treated was 27.5 per cent. and the mortality rate for tuberculosis was 26.3 per cent. There is little change in these figures from those of the preceding year.

The table of returns (Ministry of Health Classification) shows an increase in the number of patients suffering from advanced disease (T.B. + Gp.III). The routine treatment has not been changed and is supplemented by chrysotherapy and collapse therapy when indicated.

The work performed in the operating theatre was as follows:—major operations, 7; artificial pneumothorax treatments, 408; paracentesis thoracis, 522; gas replacements, 230.

These figures do not include cases treated in their own wards.

Mr. William Hay Bruce, L.D.S. succeeded Mr. A. M. MacAlpine, L.D.S., as Visiting Dental Surgeon in October 1937, and during the year 49 sessions were undertaken at which 285 patients were examined. These patients received advice, palliative or operative treatment, and 487 extractions were performed in the operating theatre or wards. General anæsthesia was employed for the extractions in 19 cases and local anæsthesia in 166 cases.

During the year some investigations were made on the treatment of pulmonary tuberculosis by serum and inoculation methods and this work is still in progress.

The recreational facilities for the patients have been increased by the introduction of inter-ward games, concerts and whist drives, while in the summer months the male patients continue to enjoy much pleasure on the bowling green.

W. M. ELLIOTT,
Physician Superintendent.

RUCHILL HOSPITAL—TUBERCULOSIS.

CASES DISMISSED AND DEATHS DURING THE YEAR 1937 AND THE AVERAGE RESIDENCE.

Pulmonary Tuberculosis.	No. of No. of			Average Residence (days).							Ages.			Result of Treatment.			
	Males.	Females.	Cases Well.	Dismissed.	-50	-100	-150	-200	-300	300+	Average Days.	-5	-15	-25	25+	Much Im- proved.	Im-Not Im- proved.
T.B.0., Group I	17	3	20	—	—	10	5	1	2	2	151	3	11	3	3	14	6
II	4	12	16	—	5	1	5	2	—	3	98	1	1	10	4	5	2
III	1	3	1	3	3	1	—	—	—	—	34	1	—	1	2	—	1
T.B.—, Group I	21	5	26	—	3	9	9	3	1	1	113	—	5	13	8	11	12
II	47	24	70	1	10	25	21	11	2	2	104	1	4	24	42	27	36
III	13	26	15	24	27	5	6	—	1	—	49	—	—	16	23	3	7
T.B.+ , Group I	3	3	6	—	—	3	1	2	—	—	114	—	—	2	4	4	2
II	148	128	260	16	37	81	81	23	36	18	132	—	3	121	152	78	163
III	118	182	137	163	108	71	56	24	24	17	103	—	4	134	162	11	68
Tuberculosis not confirmed	1	1	2	—	1	1	—	—	—	—	47	—	—	1	1	2	—
Tumour of Lung	1	1	—	2	1	—	—	—	1	—	105	—	—	—	2	—	—
Tuberculous Meningitis	1	—	—	1	1	—	—	—	—	—	17	1	—	—	—	—	—
Bronchiectasis	4	1	3	2	—	1	—	3	1	—	173	—	1	2	2	2	1
Post-Pneumonic Conditions	6	7	12	1	3	3	3	1	2	1	122	6	2	—	5	9	2
Other Conditions	3	3	2	4	3	1	1	—	—	1	93	1	—	2	3	—	1
	388	399	570	217	202	212	188	70	70	45	112	14	31	329	413	166	308
																	96

KNIGHTSWOOD FEVER HOSPITAL AND SANATORIUM.

The number of patients dismissed including those who died during the year 1937 was 1,971 as against 1,812 for the previous year. All the wards were used for the treatment of fevers except two pavilions capable of accommodating about 80 patients with advanced phthisis.

The number of fever patients dismissed from hospital was 1,532, while 177 died making a total of 1,709 patients. The mortality rate was 10.1 per cent. as against 8.1 per cent. for the previous year; this slight increase in the death-rate was due to the epidemic of influenza which was prevalent in the early months of the year.

Pneumonia.—Patients treated totalled 470 and of these 252 were lobar pneumonia, the remainder being cases of broncho-pneumonia and bronchitis in children and adults. The death-rate for the whole group was 25.1 per cent. which was much greater than that for the previous year, 16.7 per cent. This was accounted for by an epidemic of influenza which occurred during the year. The following table shows the distribution of 138 typed cases of lobar pneumonia admitted, in relation to the frequency and fatality percentages of each type:—

	Type.	Cases.	Deaths.	Frequency Percentage.	Fatality Percentage.
Type I.	36	3	26.08	8.3
Type II.	52	32	37.6	61.5
Type III.	20	17	14.4	85.0
Group IV.	30	12	21.7	40.0
Total	...	138	64	—	46.3

The data shown above reveals an exceedingly high fatality rate of the Type II. infections, a greater incidence than usual in the Type III. infections, and a higher fatality rate than formerly obtained in the Group IV. infections. An endeavour was made to type all cases of lobar pneumonia whenever a satisfactory rusty sputum could be obtained, but in a large number of the cases varied organisms other than the pneumococcus were found, due to the influenza epidemic complicating the illness during the first few months of the year. Empyema was a complication in ten cases. Two patients died after rib resection but in one of these mitral disease was actually the cause of death.

In a study carried out into the mutation of types of pneumococci many instances were found of Group IV. pneumococci in the sputum during convalescence from pneumonia due to Types I., II. and III. Six instances of the simultaneous occurrence of Type I. and Group IV. pneumococci in the sputum were met with during this investigation. Two second attacks of the illness which occurred were found to be due to another type of pneumococcus. In one case in which Group IV. pneumococci were recovered from the sputum, an acute arthritis of the ankle joint occurred due to the Type I. organism.

It is impossible to make any satisfactory conclusions from these and other conflicting results obtained throughout this work which requires much further research into this very difficult subject. An attempt is now being made to estimate the value of the treatment of pneumonia with serum associated with blood culture, leucocyte count, etc., in a selected number of cases. It is hoped that this remedy will be found to be beneficial in cases of the Type II. infection in which there was an exceedingly high mortality, 61.5 per cent., but in the limited number so far treated the results have been disappointing. In the Type I. infection this therapeutic measure has appeared to cause the crisis to supervene in about 24 hours with consequent shortening of the duration of the illness in the small number of patients treated up till the present. A full account of this work will be given in this report next year.

Scarlet Fever.—There was only a small difference in the number of patients treated, 565 as against 505 for the previous year. The type of case was more or less the same, the mortality rate being 1.06 per cent. as against 1.7 per cent. in the preceding year. Six deaths occurred and the causes of death were as follows:—Septic Scarlet Fever, 1; Meningitis following Mastoidectomy, 1; Purpura 1; Broncho-pneumonia, 1; Empyema, 1; Cardiac failure, 1.

The concentrated antitoxin for scarlet fever was administered to only 79 acutely ill patients as the type of case admitted was usually not very severe and the majority of the patients recovered quite well without the use of serum.

There were submitted to the Dick Test 16 nurses, 12 of whom gave negative reactions and the four positive reactors were all immunised. One nurse who was negative to the test developed scarlet fever one month later.

The Aurist visited all patients suffering from otitis media and it was found necessary to remove the tonsils and adenoids of 15 of these patients in order to hasten the drying up of the discharge. The conservative mastoid operation was performed on two occasions with a similar object.

Diphtheria.—A larger number of patients were treated, 379 as against 215 for the previous year. The mortality rate was a little less, 4.4 per cent. as against 5.1 per cent. for the preceding year. Seventeen deaths occurred, all of which were due to cardiac paralysis except in two instances where death followed the operation of tracheotomy. The following table shows the distribution of 107 typed cases of diphtheria in relation to the frequency and fatality percentages of each type.

	Type.	Cases.	Deaths.	Frequency Percentage.	Fatality Percentage.
Gravis	33	12	30.8	33.3
Intermediate	49	3	45.7	6.1
Mitis	25	—	23.3	—
Total	107	15	—	14.01

The data above reveals as formerly the high fatality rate of the "Gravis" infections, the high incidence and much reduced fatality rate of the "Intermediate" infections, and the low incidence and absence of deaths in the "Mitis" form of the disease. The type of illness witnessed in the "Gravis" infection is associated at the onset with much oedema and congestion of the fauces resembling much the appearance obtained in quinsy and may be quite easily mistaken for the same. It is important also that the serum is given immediately in those cases as a fatal result usually occurs if treatment is delayed until after the third day.

There were submitted to the Schick Test 27 nurses, 14 of whom gave negative and 13 positive reactions. Eleven of the susceptibles were immunised. One nurse developed "Gravis" diphtheria after the second immunising dose and if it had not been fortunate that treatment with serum was given on the first day of illness a fatal result might have taken place, as the glands in the neck were enormously enlarged, indicating a profound toxæmia.

The Aurist removed the tonsils and adenoids of nine patients in order that negative cultures could be obtained from the nose and throat prior to dismissal.

Measles.—The number of cases treated was 55 and one death occurred due to broncho-pneumonia. As a large number of these patients were adults a beginning was made in the month of October in the collection of convalescent measles serum in order to be able to have a supply ready for use in the epidemic which was showing signs of commencing.

This serum has now been proved to be of value, not so much in prevention as in modification of the attack which is the result to be desired.

Pulmonary Tuberculosis.—During the year 158 phthisis patients were discharged from hospital and 104 died, making a total of 262 patients. The hospital was mainly used for the treatment and isolation of the more advanced type of patients. The following table shows the medical classification on admission:—

Stage of Disease.	Number of Cases.	Number of Deaths in each Group.
Early	4	1
Intermediate	95	18
Advanced	163	85
Total	<u>262</u>	<u>104</u>

Apart from careful nursing and attention to the general health, no special form of treatment was adopted as the majority were in a very advanced stage of the disease.

An X-ray apparatus was installed and ready for use by the end of September and it was of great service in the diagnosis and treatment of cases both of phthisis and pneumonia.

It is hoped that soon a beginning will be made in the treatment of suitable patients by the method of collapse therapy now that it is possible to obtain photographs of the lung before and after the operation is performed.

WILLIAM DOW,
Physician Superintendent.

KNIGHTSWOOD HOSPITAL.—STATEMENT OF CASES TREATED ACCORDING TO SEX. DATA BASED ON DISMISSALS AND DEATHS FOR YEAR 1937.

Disease.	Admitted.		Dismissed.		Died.		Remaining in Hospital at 31st Dec., 1937.		Mortality, per cent.		Average Residence (days).		Deaths.		Ages (Dismissed and Died).		Altered Diagnosis.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Male.	Female.	
Typhus Fever
Enteric Fever
Paratyphoid B	...	1	...	1	...	...	...	...	...	...	...	45	...	...	...	1	2
Continued Fever	...	7	...	7	...	...	...	...	...	...	...	52	...	...	...	1	3
Puerperal Fever	2	...	...	...	...	...	...	...	...	...	1
Smallpox
Scarlet Fever	264	311	257	302	2	4	35	36	0.8	1.3	41	39	54	26	76	86	159
Diphtheria and Mem. Croup	160	212	154	208	6	11	13	14	3.8	5.0	37	35	5	6	42	30	104
Erysipelas	...	2	...	7	...	...	...	...	...	...	...	21	...	...	...	...	7
Cholera
Cerebro-spinal Fever	...	3	2	1	4	1	...	...	100.0	50.0	...	20	6	1	2	1	3
Ophthalmia Neonatorum
Trachoma
Acute Encephalitis Lethargica
Acute Poliomyelitis
Acute Poliomyelitis...
Acute Primary Pneumonia	337	118	229	92	85	19	46	15	27.1	17.1	30	28	7	10	71	50	18
Acute Influenzal Pneumonia	...	30	15	19	12	10	4	3	34.5	25.0	35	34	6	10	2	3	1
Malaria	...	1	...	1	...	...	...	...	...	...	...	13	...	...	1	...	6
Dysentery	...	9	19	8	20	1	1	1	11.1	4.8	33	27	20	12	6	7	2
Relapsing Fever
Pulmonary Tuberculosis	...	1	1	...	1	1	...	...	100.0	100.0	...	...	...	...	...	...	...
Other forms of Tuberculosis
Measles	...	32	28	29	23	1	1	3	6	3.3	4.2	27	41	9	7	17	6
German Measles	...	3	5	3	5	...	...	...	...	...	...	14	11	...	1	2	2
Whooping-cough	...	31	29	26	26	10	10	...	27.8	27.8	60	44	7	13	32	4	3
Chickenpox	...	2	2	1	2	...	1	1	...	...	41	24	...	...	...	...	2
Mumps	...	4	6	3	4	1	...	2	25.0	...	14	19	3	...	2	2	1
Child with Mother	1	...	1	...	...	...	...	...	...	14	...	...	...	1	...
No apparent Disease
Others	...	32	21	33	24	4	3	...	10.8	...	27	23	2	...	12	9	4
Unclassified (Staff)	28	...	29	...	...	...	...	...	...	13	...	...	...	...	29
Influenza	...	4	1	4	1	...	...	...	...	...	...	17	17	...	2	2	1
Totals	915	809	767	765	125	52	107	74	14.0	6.4	36	35	7	14	263	305	278
Phtisis (Sanatorium)	...	255	...	158	...	104	...	63	39.7	...	120	...	78	...	1	261	...

SHIELDHALL FEVER HOSPITAL.

During the year 1,197 patients passed through the hospital, an increase of 121 over the previous year. Of that number 69 died giving a general mortality rate of 5.7 per cent. which is considerably smaller than previous years, due partly to an increase in the number of scarlet fever cases treated and to a reduction in the mortality from both lobar and broncho-pneumonia which were mild in character during the year.

The largest number of beds occupied was 134 on 23rd November, and the smallest 68 on 14th July, the average being 97.

Two cases of scarlet fever occurred amongst the members of the nursing staff during the year. These were both new nurses to the hospital and the infection developed before they had been Dick tested and allowed into a scarlet fever ward. Dick and Schick testing was carried out as before on new members joining the staff. Of these 33 per cent. were Schick positive, and 22 per cent. were Dick positive. These positive reactors were immunised.

Scarlatina.—505 cases were treated during the year, an increase of 153 over the number for last year. The numbers admitted during the various months of 1937 remained at a consistently high level. Three deaths occurred—giving a mortality rate of 0.6 per cent. Septic complications were as follows:—

	1937.	1936.	1935.
Otorrhoea	10.0 per cent.	8.8 per cent.	10.2 per cent.
Rhinorrhoea	7.5 „	8.8 „	10.8 „
Cervical Adenitis	22.9 „	22.8 „	20.7 „
Arthritis	4.5 „	6.0 „	3.0 „
Nephritis and Albuminuria ...	3.3 „	5.7 „	5.0 „

The three deaths were due to complications—Septic Meningitis, Lobar Pneumonia and Septicæmia—the latter two occurring after a period of 60 days residence in hospital. Other severe complications were Endocarditis—twice—and Mastoiditis—three times. Reinfection was observed once only giving a remarkably low figure of 0.2 per cent.

Serum was given to 87 cases (11 per cent.) most of whom had a severe infection; complications occurred in 29 of these (33 per cent.). Proseptasine tablets were given to cases with discharges, a treatment which was apparently beneficial. This drug does not seem to be so specific for scarlatina as it is for other streptococcal infections, the rate of incidence of complications such as adenitis, being unreduced in cases to which it has been administered on admission.

The Aural Surgeon paid 27 visits during the year, examining 49 cases. Of these three required mastoidectomy while tonsillectomy was performed on 14.

Pneumonia.—348 cases were treated. Of these 148 were Lobar infections and 192 Broncho infections and 8 Influenzal. Deaths were 26, and 19 and 1 respectively giving percentages for the three groups as follows:—

Lobar	...	...	...	17.6
Broncho	...	...	...	9.9
Influenzal	...	...	...	12.5

There has been a noticeable decrease in the number of deaths from Broncho-pneumonia, for, whereas the number of cases remains the same, the deaths are practically half those of last year, probably due to the absence of measles from the city. Common complications were enteritis in children, 17; pleurisy with effusion, 6; nephritis, 6; empyema, 4; mitral disease, pericarditis and other forms of heart disease, 4. Deaths occurred in 2 (50 per cent.) empyema cases on both of whom rib resection had been performed, one of them suffered from nephritis also. Four of the 6 cases of nephritis terminated fatally. Pleurisy with effusion was present in one case of lobar pneumonia that terminated fatally.

Diphtheria.—269 cases (29 more than last year) were treated during the year. Eleven deaths occurred, the mortality, 4.1 per cent., being the same as last year. Deaths occurred mainly in the

months of January and February, August and November. Clinically the types were as follows:—

	1937.	1936.
Tonsillar	202 (75.1%)	182 (75.8%)
Nasopharyngeal	39 (14.5%)	29 (12.1%)
Laryngeal	16 (5.9%)	20 (8.3%)
Bacteriological	10 (3.7%)	9 (3.8%)
Anterior Nasal	2 (0.7%)	

Fatal cases with one exception occurred entirely in children under 12 years of age. Nine were due to the nasopharyngeal type and of these 4 were complicated by severe toxæmia, 2 by bronchopneumonia, 1 by enteritis, 1 by myocarditis, and 1 (an adult of 25 years of age) by hæmorrhage and syncope. Two deaths occurred in laryngeal cases on which tracheotomy had been performed; both were moribund on admission.

Paralysis occurred in 14 cases; palatal, 10; ciliary, 2; and orbital, 1. None of these was fatal. One complex case of paralysis of palatal pharynx and lower limbs occurred in a child of 5 who recovered completely in a period of 4 months.

Other Diseases.—Of the remaining 75 cases only 12 were of an infectious nature—including 1 enteric, 1 cerebro-spinal fever, 1 whooping-cough, 2 influenza and 7 of tuberculosis. The case of enteric had a paratyphosus B infection and made an uneventful recovery in 44 days. The case of cerebro-spinal fever, a child aged 3 years, died on its 4th day of illness. Of the 7 tuberculosis cases, 4 had a pulmonary infection—one a young adult dying of a superimposed peritoneal tuberculosis, and 3 children aged 6 years, 4 years and 7 months died of tuberculous meningitis. The cases of whooping-cough and influenza recovered. Of the remainder, 24 were cases in which no disease was found; most of these had been certified as suffering from scarlatina. Other interesting cases under observation were two cases of pericarditis (one a child aged 8 days who succumbed), and 2 cases of cancer of the lung in elderly persons both of whom died. Seventy-seven diagnosis were revised during the year.

I. B. L. WEIR,
Acting Physician Superintendent.

ROBROYSTON HOSPITAL.

The allocation of beds among the various departments of the hospital remains exactly as for 1936. It is given below:—

Pulmonary Tuberculosis	...	...	...	...	...	184
Non-pulmonary Tuberculosis	...	...	...	...	...	224
Puerperal Fever	...	...	...	...	...	56
Pneumonia	...	...	...	...	...	60
Abortions (overflow from Glasgow Maternity Hospital)	...					10
Beds for non-tuberculous surgical chest disease in males	...					10
Beds for non-tuberculous surgical chest disease in females...						10
Total	...	...	...			<u>554</u>

PULMONARY TUBERCULOSIS.

The number of patients dismissed during 1937 was 186—a decrease of 21, as compared with the previous year's figures. Cases were on the whole admitted in the earlier stages of the disease and the duration of treatment was shorter; more cases were suitable for artificial pneumothorax. This applies much more to the women who were treated than to the men. In the latter, disease was too often advanced and in a large proportion was complicated by severe extrapulmonary lesions requiring prolonged treatment. These complications greatly reduce the number of beds available for phthisis in males. These points are exemplified by the number of inductions of pneumothorax. Among the females 71 inductions were accomplished successfully and a further 11 attempts either failed at the outset, or, being therapeutically useless were soon abandoned. In the pavilion for males on the other hand, there were only 31 successful inductions and in 8 other cases the attempt failed. The total of 102 was nevertheless the largest number so treated successfully in one year in the hospital. These, with others continued from 1936, required 2,772 refills.

Simultaneous bilateral pneumothorax was induced in 7 cases of which 2 died. In the other 5 definite improvement could be recorded. There were no operative fatalities, and, even in bilateral pneumothorax, complications were not prominent. The various gold preparations were freely used to combat contralateral spread of disease. With regard to gold therapy, the combined use of

Crisalbine with Calcium gluconate has confirmed our opinion that gold so given is efficacious and is less prone to cause harmful reaction than gold salts given alone intravenously. Tuberculin, given as bacillary emulsion, was used in a large number of patients. Given cautiously in graduated doses, it was of distinct benefit in the more chronic and fibrotic forms of phthisis.

Mr. J. A. Bingham and the Resident Surgeon performed 24 operations on the thorax on tuberculous patients. The patients involved numbered 20. Thoracoscopy was undertaken 10 times on 9 patients, and in three instances adhesions were separated to allow of cavity closure. In two this was wholly successful and was without appreciable complication. In the third—so far incompleting—the operation was followed by an effusion which eventually became purulent. In a fourth the adhesion was too big to cut in one session, but its coagulation was followed by stretching and eventual rupture. Again the cavity concerned wholly closed. The remaining thoracoscopic examinations revealed too close adherence of the cavities to the parietes to justify division. Operations on the phrenic nerve were performed on three occasions, in one to augment the collapse attained by pneumothorax and in two to replace collapse by that means, pneumothorax having failed. Six patients underwent thoracoplastic operations. Apical thoracoplasties were undertaken for cavity closure in the case of five patients. In three the operation was paravertebral in type, and in two anterolateral operations were found necessary to supplement previous operations. One patient died from shock following the first stage of thoracoplasty. One patient died on the 10th postoperative day from non-tuberculous broncho-pneumonia. In the others the operations were technically and clinically successful.

Apart from tuberculosis 8 further thoracic operations were undertaken on 7 patients. These were:—thoracoplastic operations, 3; major thoracotomies, 4; phrenicectomy, 1. With one exception these were done for chronic lung sepsis; the exception was an instance of bronchial carcinoma; extirpation was impracticable. With the co-operation of the Visiting Surgeon for diseases of the Ear, Nose and Throat, 4 bronchoscopies were carried out, for the more complete investigation of chronic lung suppuration.

NON-PULMONARY TUBERCULOSIS.

A total of 219 patients with non-pulmonary disease were discharged from hospital during 1937 including 39 deaths. The following table gives the site of the lesions and also the number of operations done in this department. An additional list includes surgical procedures in other branches of the hospital.

Site of Lesion.	No. of Cases.	Deaths.	Operations during 1937.
Tuberculosis of Spine	48	13	4
Tuberculosis of Hip	16	3	1
Tuberculosis of bones other than spine	21	1	3
Tuberculosis of joints other than Hip ...	32	1	13
Genito-urinary Tuberculosis	27	2	*61
Multiple and Miscellaneous Lesions ...	27	8	2
Abdominal Tuberculosis... ..	38	10	5
Tuberculous Adenitis	10	1	3
Total	<u>219</u>	<u>39</u>	<u>92</u>

* Includes 24 cystoscopic examinations.

Additional operations (on tuberculous and non-tuberculous patients):—

(a) Thoracic (all forms)	32
(b) Abortions	77
(c) Puerperal Fever	152
(d) Dental, Throat, Nose and Ear	9
(e) On Non-tuberculous Patients and Staff (exclusive of thorax and genito-urinary systems)	14
Total	<u>376</u>

The following 53 patients proved to have no tuberculous disease. There were 10 deaths.

Admitted to wards for surgical treatment of non-tuberculous chest conditions: Bronchiectasis, 14; bronchial carcinoma, 3; chronic empyema, 1—total, 18.

Admitted to genito-urinary department as tuberculous infections: Chronic cystitis, 2; chronic pyelitis, 4; hydronephrosis, 1—total, 7.

Admitted as various forms of non-pulmonary tuberculosis: Diverticulitis, 1; carcinoma of pancreas, 1; myeloid leukæmia, 1; subphrenic abscess, 1; lymphadenoma, 1; bronchial carcinoma, 1; osteomyelitis of femur, 3; sacroiliac strain, 1; spinal injury, 1; neurasthenic spine, 1; gonococcal arthritis, 1; tertiary syphilis, 1—total, 14.

Admitted as pulmonary tuberculosis: Malnutrition, 2; neurasthenia, 1; bronchitis, 3; pleurisy, 2; postpneumonic fibrosis, 1; bronchiectasis, 2; mitral stenosis, 1; bronchial carcinoma, 1; carcinoma of pancreas (with metastases in lungs), 1—total, 14.

PUERPERAL SEPSIS AND PYREXIA.

Below is given a synopsis of the patients who were dismissed or who died during 1937:—

TABLE 1.—SYNOPSIS OF PATIENTS.

	Total.	Deaths.
1. Puerperal Sepsis following delivery of a viable child ...	249	27
2. Puerperal Sepsis following delivery of a non-viable child ...	75	11
3. Patients not suffering from puerperal sepsis (excluding abortions)	56	7
4. Abortions (non-septic)	41	—
Death-rate 1.—Sepsis following delivery of a viable child ...	...	10·8%
Death-rate 2.—Sepsis following delivery of a non-viable child ...	...	14·6%
Combined death-rate ... ..	...	11·4%

TABLE 2.—PREDOMINANT LESION FOLLOWING SEPSIS AFTER THE BIRTH OF A VIABLE CHILD.

	Total.	Died.
Perineal and vaginal sepsis	2	—
Uterine sepsis	100	5
Adnexal sepsis	23	—
Pelvic Cellulitis	15	—
Phlegmasia Alba Dolens	30	2
Peritonitis	20	3
Septicaemia	59	17
Total	<u>249</u>	<u>27</u>

TABLE 3.—PREDOMINANT LESION FOLLOWING SEPSIS AFTER THE BIRTH OF A NON-VIABLE CHILD.

	Total.	Died.
Perineal and Vaginal Sepsis	—	—
Uterine Sepsis	34	—
Adnexal Sepsis	7	1
Pelvic Cellulitis	8	—
Phlegmasia Alba Dolens	4	—
Peritonitis	11	3
Septicaemia	11	7
	<u>75</u>	<u>11</u>

Patients suffering from conditions other than Puerperal Infection.

—The seven deaths recorded in Table I (3) are accounted for as follows: Influenzal broncho-pneumonia, 1; acute primary pneumonia, 1; mitral stenosis with acute pulmonary oedema, 1; mitral stenosis with malignant endocarditis, 1; acute mastitis, 1; gangrenous cystitis, 1; facial cellulitis, 1. The diagnosis of the 49 patients who recovered were: No disease found, 1; normal pregnancy, 3; hyperemesis gravidarum, 1; subinvolution and menorrhagia, 2; mitral stenosis with coronary embolism, 1; acute tonsillitis with septicæmia, 1; urinary infection, 4; acute bronchitis, 1; lobar pneumonia, 2; influenzal broncho-pneumonia, 1; acute pulmonary tuberculosis, 1; chronic pulmonary tuberculosis, 4; acute appendicitis, 2; varicose veins, 1; acute mastitis, 24.

A slight drop in the death-rate compared with previous years for all cases of puerperal sepsis is recorded, but, in view of recent developments in the treatment of streptococcal infections by sulphanilamide, the figure at first sight is disappointing. The impression nevertheless firmly remains that sulphanilamide is an invaluable agent in the treatment of some forms of septicæmia and of peritonitis. Gratifying recoveries have been recorded since the last report. In some patients where peritoneal invasion was minimal and noticed early, reliance was placed entirely on sulphanilamide, and in only one instance was further interference found necessary; even then laparotomy gave evidence that the condition was becoming quiescent. So far, however, sulphanilamide has been found to have little or no influence on lesions which are not caused by a hæmolytic streptococcus. Two patients died of non-hæmolytic streptococcal septicæmia, and two of a mixed streptococcal and staphylococcal blood infection. Two patients also died, who were admitted with severe mitral stenosis—one died of cardiac decompensation and one of subacute bacterial endocarditis. Sulphanilamide was apparently without effect on the one case of *B.coli* septicæmia encountered. One woman, virtually recovered from septicæmia and peritonitis, died in convalescence from agranulocytic angina, in the causation of which sulphanilamide probably played a great part.

A further unusual feature of the past year's work should be recorded. Hitherto, from 1930 till the end of 1936, no death has been recorded from lesions classified as local or uterine sepsis, uncomplicated by graver manifestations. In the past year there were 5 such fatalities. Two are already accounted for by mitral stenosis, but the remaining three died of pulmonary embolism, during late

convalescence. Similarly, four patients died from the same cause during the course of septicæmia, and again three of these patients were apparently convalescent just prior to death. The natural inclination to attribute these deaths to sulphanilamide should be resisted, meanwhile at least, though there is little doubt that, since its introduction emboli have been of much more frequent occurrence. It is possible that these deaths are in some way related to "late" deaths recorded by other writers. As compared with the previous year more patients were admitted who were suffering from the more serious forms of puerperal infection. In 1935 and 1936, about 45 per cent. of all patients suffered from severe sepsis, whereas in 1937 58 per cent. were so affected. Particularly outstanding is the increase in severe sepsis following abortion. In 1937 the figure for severe sepsis following abortion was 51 per cent. as compared with 31 per cent. in 1936 and 38 per cent. in 1935. This is reflected in the death rate for septic abortions which, at 14.6 per cent, is considerably higher than either of the other two years cited. Undoubtedly many of these abortions are of criminal origin, but almost invariably the patient states that it was brought about by her own effort, and in many instances this appears to be true. Only rarely are there visible signs of criminal interference, and prosecutions, if instigated, would almost certainly fail. These septic abortions, with their high incidence of peritonitis and septicæmia, constitute a serious obstacle to the efforts to reduce the death-rate from puerperal sepsis. The heavy mixed infections associated with them render them very difficult to treat successfully.

ABORTIONS (GLASGOW MATERNITY HOSPITAL OVERFLOW).

The following table summarises the conditions encountered during the past year. The opportunity was taken, in conjunction with the septic abortions in ward 3, to compare the Ascheim-Zondek and Visscher-Bowman tests for pregnancy. The latter has been discarded as unreliable.

Discharged, 156. Died, nil.					
Threatened Abortion	...	...	...	...	21
Inevitable Abortion	...	...	...	...	17
Incomplete Abortion	...	...	...	...	82
Complete Abortion	...	...	...	...	22
Missed Abortion	...	...	...	...	5
Not Pregnant	...	...	...	...	3
Transferred elsewhere for Confinement	...	...	...	...	2
Premature Labour (child alive)	...	...	...	...	1
Transferred as Septic on admission	...	...	...	...	3
Total	...	...	...	...	156

PNEUMONIA.

During 1937, there were discharged 179 patients who had been admitted following notification as pneumonia. The diagnosis was unconfirmed in 89 instances and was changed as follows: Bronchitis, 60; influenza, 7; cardiac failure due to chronic bronchitis, 1 (died); pulmonary tuberculosis, 5; tuberculous meningitis, 1; septicæmia, 1; subacute bacterial endocarditis, 1; transferred elsewhere as erysipelas, 1; transferred as measles, 4; transferred as whooping-cough, 7. The remaining 91 suffered from broncho-pneumonia in 75 instances, of which 14 died, and from lobar pneumonia in 16 cases, with 2 deaths

JOHN WATSON,
Medical Superintendent.

MEARNSKIRK HOSPITAL.

During 1937 the work of the institution was continued on the same lines as formerly. On 1st January there were 481 patients resident in hospital. During the year 523 further cases were admitted and 509 were dismissed or died, leaving 495 patients still in residence at 31st December, 1937. These figures are shown along with the corresponding figures for 1933 to 1936 in the following comparative table:—

PATIENTS ADMITTED AND DISMISSED, 1933-1937.

Year.	Admitted.	Dismissed.	In Residence at 31st December.
1933	463	463	501
1934	474	502	473
1935	494	468	499
1936	506	524	481
1937	523	509	495

The conditions treated were similar in type to those treated in former years. They fell into the same three groups and the proportion of cases in each group was similar to that recorded for 1936. There was therefore an apparent arrest of the increase of pulmonary cases and decrease of non-pulmonary cases noted between 1933 and 1936. This is shown in the following table where the figures given are percentages of the total number of dismissals in the corresponding year:—

	1933.	1934.	1935.	1936.	1937.
(1) Non-pulmonary Tuberculosis	67.8	63.0	55.1	54.8	55.6
(2) Pulmonary Conditions ...	20.5	22.7	32.5	34.7	33.4
(3) Orthopaedic Conditions ...	11.7	14.3	12.4	10.5	11.0

(1)—NON-PULMONARY TUBERCULOSIS.

A.—ABDOMINAL TUBERCULOSIS.

In 1937 there was a further slight fall in the number of abdominal cases dismissed. The patients in this group represented 14.5 per cent. of the total dismissals compared with last year's figure of 15.7 per cent.

As in former years the patients coming under this heading presented lesions which were varied in type and severity. The condition complained of was frequently mild or obscure and among a total of 74 patients a definite diagnosis of abdominal tuberculosis could be made in only 40 cases. Some of the remaining 34 cases may have had early tuberculous lesions but during residence none of them produced signs or symptoms on which a diagnosis of active abdominal tuberculosis could be based. Most of them (23) were suffering from malnutrition but 11 had definite lesions diagnosed as follows:—Active rickets, 3 cases; lymphadenoma, 2 cases; non-tuberculous enteritis, 2 cases; and single cases of coeliac disease, chronic nephritis, renal calculus and hilum adenitis. There were 3 deaths among the non-tuberculous cases. Both patients with lymphadenoma died and the coeliac disease after an early response to dietetic treatment ultimately proved fatal. The other 31 cases responded well to the treatment given and were dismissed in good general health.

Among the 40 cases with abdominal tuberculosis the conditions present were as follows:—

Tabes Mesenterica	...	...	...	...	...	23
Tuberculous Peritonitis	...	...	...	...	...	6
Tuberculous Peritonitis with Ascites	...	...	...	...	...	4
Caseating Abdominal Tuberculosis	...	...	...	...	...	6
Ileo-caecal Tuberculosis	...	...	...	...	...	1
						<hr/> 40 <hr/>

The disease was of an acute type in 19 cases, while it was sub-acute in 17 and chronic in 4. The duration of the symptoms complained of varied from 2 weeks to 6 years. In 3 cases a previous course of treatment had been given and the patients were admitted with a recurrence of activity. There was a history of contact with tuberculosis in the family in 9 cases and the tuberculin test (Mantoux) gave a positive reaction in 30.

All patients received general and dietetic treatment. Operation was required during residence in one case only. This operation was for the relief of partial obstruction. In addition 10 cases had undergone abdominal operation prior to admission. Paracentesis abdominis was carried out when necessary in the ascitic cases. Among the non-tuberculous patients three operations were required as follows:—Pyelotomy for the removal of a calculus from the renal pelvis, splenectomy, and excision of lymphadenomatous glands.

There were four deaths in the tuberculous group. All the fatal results occurred in patients admitted with advanced caseating lesions. In one there was in addition pulmonary disease and one developed acute miliary tuberculosis. There were 5 irregular dismissals and the remaining 31 patients were dismissed with the disease healed and in good general condition after an average residence of 173 days.

B.—BONE AND JOINT TUBERCULOSIS.

1.—*Tuberculosis of the Spine.*—In this group there were 39 patients suspected of having spinal tuberculosis. Of these, 34 were found to be suffering from spinal caries, while 2 had large subcutaneous abscesses in the dorsal region and one had rheumatic torticollis. In the other 2 cases there was a history of localised tenderness over the spine but after observation tuberculosis was excluded.

The following facts relating to the 34 cases of spinal caries are of some interest. The disease was of recent origin in 18 cases, while in 3, signs had been present for more than six months. The remaining 13 cases had old standing lesions varying in duration from one to nine years. Of the latter 3 had received no previous treatment, 1 was transferred from another institution during the course of treatment and 9 were admitted with recurrence of activity after previous hospitalisation.

A history of antecedent injury was recorded in 9 cases, while in 9 there was a history of contact with tuberculosis. The tuberculin test (Mantoux) was positive in the 33 cases in which it was carried out.

The insidious nature of spinal caries was illustrated in the various modes of onset described. Frequently the disease was extensive before advice was sought. In 12 cases in the present series attention was first attracted to the spine by the insidious development

of deformity, while in 3 cases the first signs were, loss of power in the legs, the appearance of an iliac abscess and the development of flexion contracture at the hip. In the remaining 19 cases the first complaint was of pain, local in 13 cases and referred to the abdominal wall in 6. In 4 of the latter an acute abdominal lesion had been suspected at the outset.

In the majority the trouble began at an early age. According to the case records the age at onset was under 5 years in 24 of the 34 cases, while in 9 the disease appeared between the ages of 5 and 10 years. In those cases where deformity was the first sign noted and probably in many others the actual age at onset was earlier than that recorded. Males and females were affected in almost equal numbers. The lower dorsal spine was implicated most often and the distribution in the various regions were as follows: Cervical, 4; dorsal, 16; dorso-lumbar, 7; lumbar, 5; lumbo-sacral, 2. The disease was frequently extensive, 4 to 13 vertebræ being involved in 24 of the 34 cases. In 2 cases there was a double localisation of disease in the spine. Deformity was present on admission in all but 2 cases. The kyphosis was slight in 15 cases, moderate in degree in 10, and of a gross nature in 7. On dismissal there was no visible deformity in 3 cases. In 21 the deformity was improved, while in 10 cases the alignment of the spine was improved by the production of compensatory curves.

Abscess formation was frequent. Many abscesses occurring in spinal caries remain localised around the diseased vertebræ and do not become clinically apparent. The true incidence of abscess can only be arrived at by including abscesses revealed by X-ray examination and abscesses known to have been present at a prior date although healed at the time of admission. Among the 34 patients in the present series abscesses formed in 29 cases. Of these abscesses 14 became palpable and of these 5 went on to sinus formation. The figures and the method of their computation are shown more clearly in the following table:—

	Total No. of Cases.	Radiological.	Clinical.	Sinus Formed.
History of Abscess	3	1	2	1
Abscess Present on Admission ...	23	11	12	4
Abscess Developed in Residence	3	3	—	—
Total	<u>29</u>	<u>15</u>	<u>14</u>	<u>5</u>

All the sinuses developed from abscesses present before or at the time of admission. In many such cases the abscesses are already secondarily infected before coming under treatment. With regard to nervous manifestations, most of the cases showed some evidence of pressure on the spinal cord. In 19 the leg reflexes were exaggerated, while in 4 there was in addition definite spasticity. In only 2 cases was there paraplegia with loss of sensation and loss of sphincter control.

There were 4 deaths. Three of these occurred shortly after admission in young infants under 5 years of age who had, in addition to the spinal lesion, widespread disease of both lungs and other complications. The other death occurred in an older child and followed the development of tuberculous meningitis.

One patient was dismissed irregularly and the remaining 29 were dismissed in very good general condition with the spinal disease arrested or quiescent.

Treatment was carried out along the usual lines. Immobilisation in the early stages was secured on the Mearnskirk spinal carriage. In the second stage plaster of Paris was utilised for fixation, 43 plaster jackets, 6 plaster fillets, 2 plaster collars, and 9 other plaster appliances being made. More permanent supports were fitted on dismissal in 29 cases as follows: 15 spinal braces, 6 certalmid jackets, 7 expanding collars, 3 certalmid spicæ, and 1 walking caliper. Three patients each required two appliances.

Operative treatment was undertaken only for incidental conditions. The following operations were carried out: Radical mastoid, 1; tonsils and adenoids removed, 6; manipulation of hip, 1. In addition 15 patients received dental treatment. The average duration of residence in hospital was 818 days.

2.—*Tuberculosis of Other Bones.*—Under this heading there were 27 cases of which 11 were suspected of having disease in the long bones of the hands and feet and 16 were diagnosed as having tuberculosis of other bones. Of the former, 10 were found to be suffering from tuberculous dactylitis, while 1 had a ganglion over the base of the first metatarsal. Among the latter, 10 had tuberculosis of bones as follows: Bones of skull, 3; ribs, 3; bones of extremities, 4; while 6 had other conditions diagnosed as chronic non-tuberculous osteomyelitis, 2; and tuberculosis of soft tissues, 4.

Among the 10 cases with tuberculous dactylitis the hands were affected in 8 and the feet in 2. A history of injury was present in 3 cases and 6 gave a history of tuberculosis in the family. The tuberculin test was positive in the 9 cases in which it was carried out. The lesion was of short duration in 7 cases but had been present for more than six months in 1 case and more than a year in 2 cases. Abscesses developed and went on to sinus formation in 8 cases. The sinuses were already present on admission in 3 cases but developed during residence in 5. Treatment was usually conservative in nature, amputation of a finger being required in 1 case only. In addition to treatment for the local condition 3 mastoid operations were required in this group.

There was one death which occurred in a male infant with a bad family history. Pulmonary disease was present in addition to the dactylitis and death followed the development of tuberculous meningitis. Two patients were dismissed irregularly and the other 7 left hospital in good condition with the disease arrested after an average residence of 411 days.

In the other group of 10 cases the disease affected the following bones: Nasal and ethmoid, 1; mastoid, 1; mandible and malar, 1; ribs, 3; clavicle, 1; ulna, 1; and tibia, 2. All had abscesses and 9 developed sinuses which in 7 cases followed incision for the removal of the focus of the disease. Sinuses of this type usually heal rapidly.

The tuberculin test was positive in every case. A family history of tuberculosis was present in 4 cases and 2 gave a history of previous injury.

There was one death which occurred in a female child aged 1 year. In this case disease of the lower end of the tibia invaded the ankle joint and death followed the development of tuberculous meningitis. One patient was dismissed irregularly and the other 8 were dismissed in good health and with the disease arrested or quiescent after an average residence of 417 days.

3.—*Tuberculosis of the Hip Joint.*—There were 47 cases with disease in or around the hip joint. Tuberculosis of the hip was present in 31 of these and in the remaining 16 the following conditions were diagnosed: Transient arthritis, 6 cases, osteochondritis juvenilis coxæ, 4 cases; infective arthritis, 3 cases; and single cases of sarcoma of ilium, osteomyelitis of femur and inguinal adenitis.

Among the 31 tuberculous cases the sexes were affected in almost equal numbers but the right hip was the seat of disease more often than the left in the proportion of 18 to 12. In one case the disease was bilateral. In 17 the onset of disease was preceded by injury and 5 gave a history of tuberculosis in the family. The tuberculin test (Mantoux) was positive in all of 30 cases in which it was carried out.

The most common age at onset was three years and in 18 of the 31 cases the disease made its appearance during the first five years of life. The duration of signs prior to admission varied from one month to twelve years being under six months in 12 cases, under a year in 5 cases and over a year in 14 cases. Of the advanced cases 11 had previously received prolonged courses of treatment and were re-admitted, 5 because of recurrence of activity and 6 for the correction of deformity or for arthrodesis. Of the remaining 3 advanced cases 2 had previously had some treatment and 1 had had no previous treatment.

In 18 cases all the joint structures were involved before coming under observation but in 13 cases the site of origin was apparent. In 4 the synovial membrane was first affected. In all of these there was a prolonged period with clinical evidence of joint disease but with negative radiograms. Later, erosion of articular surfaces appeared. In one, spontaneous dislocation of the hip occurred before a bone focus could be detected. In the remaining 9 cases the disease began in bone, the ilial acetabulum being involved in 4 and the femoral neck in 5. In 3 of the latter the disease remained extra-articular but in 2 the joint was invaded. There were in all therefore, 3 cases with extra-articular lesions and 28 with true tuberculous arthritis.

Abscess formation occurred in 19 of the 31 cases and went on to sinus formation in 13. Six patients had had abscesses before admission and from all of these sinuses had developed. Of these sinuses 2 were healed on admission and 4 were still discharging. In 4 cases abscesses were present on admission and from these sinuses developed in 2. During residence abscesses developed in 6 cases and went on to sinus formation in 5. In the remaining 3 cases calcified abscesses which had never become palpable were noted in radiograms during the latter stages of treatment.

Deformity was present on admission in 30 cases and 19 showed some degree of mobility. On dismissal there was no deformity in 3 cases and in 28 the deformity was improved. The joint was movable in varying degrees in 11 cases but immovable in 20. Of the latter 6 showed a sound osseous ankylosis following Hibbs' extra-articular arthrodesis.

There were no deaths. Two patients were dismissed irregularly and the remaining 29 were dismissed in excellent general condition with the disease apparently arrested in 26 and quiescent in 3.

Treatment was on the usual lines, the earlier stages being conducted on the Mearnskirk adjustable carriage. In the second stage immobilisation in plaster of Paris was carried out, 66 plaster hip spicæ being made. On dismissal supporting appliances were supplied to 29 patients as follows:—CertaImid hip spicæ with pattens and crutches, 24; walking calipers, 5. In addition 7 calipers were supplied to non-tuberculous patients.

Operative treatment was required in 12 cases, 15 operations being undertaken as follows:—Extra-articular arthrodesis, 6; (illial graft, 1; trochanteric graft, 5); osteotomy of femur, 3; manipulation of hip, 3; tenotomy of adductors, 1; sequestrectomy, 1; incision of infected abscess, 1. Surgical measures were required for other conditions as follows:—Nephrectomy, 1; tonsillectomy, 1; chromocystoscopy, 1. Dental treatment was given in 18 cases. The average duration of residence was 640 days.

4.—*Tuberculosis of Knee*.—Of 35 patients in this group 27 had tuberculosis of the knee, while 8 were found to be suffering from non-tuberculous affections diagnosed as follows:—Transient arthritis, 6 cases; rheumatic arthritis, 1 case; and hæmophilia of the knee, 1 case.

In all the transient cases there was a definite history of injury. The signs and symptoms of knee joint involvement disappeared after a comparatively short period of treatment, the average duration of residence being five months.

Among the 27 tuberculous cases an unusual feature was the preponderance of females over males (F. 20, M. 7). The right and left knees were affected in almost equal numbers. A history

of injury was recorded in 14 cases and 9 gave a family history of tuberculosis. The tuberculin test (Mantoux) was positive in every case.

The disease was of recent origin in 8 cases, while in 3 it had been present for more than six months prior to admission. The remaining 16 cases had old standing disease with a duration varying from one to eleven years. Of the latter 4 had had some previous treatment, while 12 had already received prolonged treatment and were re-admitted because of the recurrence of deformity (7) or activity (5). In 19 of the 27 cases the age at onset was under five years.

In 3 cases the disease had its origin in an osseous focus in the epiphysis of the tibia (2) or femur (1) but the articular surfaces were not implicated although the adjacent soft tissues showed evidence of infiltration. In one case the disease began in the patella and ultimately involved the joint. There were 7 cases admitted with tuberculous synovitis in which the disease never extended beyond the synovial membrane, while in 6 similar cases the articular surfaces later became involved. Among 10 cases admitted with recurrence of deformity or activity and with extensive erosion of the articular cartilages the disease was found to have commenced in the synovial membrane in 6, while in 1 the disease had its origin in the epiphysis of the femur (medial condyle). In the other 3 old cases the site of origin was not apparent in the earliest films available. It will be seen therefore that among the 27 cases described the disease began in the synovial membrane in 19 cases, remained localised in 7 but spread to the articular surfaces in 12. In 5 cases the disease began in the bone and remained localised in 3 but involved the joint in 2, while in 3 cases the site of origin was undetermined.

Site of Origin.				Remained Localised.	Involved Whole Joint.	Total.
Synovial Membrane	...	...		7	12	19
Epiphysis of Femur	...	...		1	1	2
Epiphysis of Tibia ...	...	...		2	—	2
Patella	...	...	...	—	1	1
Unknown	...	...	...	—	3	3
				<u>10</u>	<u>17</u>	<u>27</u>

Abscess formation occurred at some stage of the disease in 11 cases and sinuses formed in 7 of these. In 5 cases an abscess had developed before admission and went on to sinus formation in 4 cases. The sinuses were healed on admission in 2 of these but in the other 2 the sinuses were still open. An abscess was present on admission in 3 cases and from these sinuses developed during residence in 1 case. Three further cases developed abscesses during residence and 2 of these went on to form sinuses. In addition one sinus resulted for the removal of a sequestrum and tuberculous debris from a juxta-articular osseous focus.

Deformity was present on admission in 19 cases and in 7 of these there was backward subluxation of the tibia. On dismissal there was no deformity other than slight shortening in 20 cases, while in 7 the deformity remaining was of a minor degree. Some mobility was present on admission in 17 cases but on dismissal there was total immobility of the joint in 20. Of these, 7 had firm osseous ankylosis which is the best result short of return to normal function. Where there is osseous ankylosis the danger of recurrence of deformity or of activity is greatly diminished.

Operation or manipulation was required in 13 cases as follows: Arthrodesis, 6; manipulation, 4; excision of diseased area of bone, 2; cuneiform supracondylar osteotomy, 1. Two operations were required for other conditions as follows: Nephrectomy, 1; appendicectomy, 1.

Two patients died. In both cases death resulted from pulmonary complications and not from the disease of the knee. The remaining 25 patients were dismissed in excellent general condition with the disease arrested or quiescent. Supporting appliances were fitted as required before dismissal. In all, 26 walking calipers were supplied. During the course of treatment 32 leg plasters were made and to these Böhler's irons were fitted when necessary to allow of ambulant treatment. The average duration of residence was 528 days.

5.—*Tuberculosis of the Ankle and Tarsus.*—Of 11 patients suspected of having disease of the ankle 10 were found to have tuberculosis in the ankle region, while in 1 the limp and muscular wasting

present were found to be due to limited infantile paralysis. Among the 10 cases of tuberculosis in the ankle region the disease affected the ankle joint proper in 8 cases, while in 2 the disease was in the tarsal bones. Among the true ankle cases the site of origin was apparent in 7 the disease beginning in the synovial membrane in 3 and in the bone in 4. In the other case the whole ankle and subastragaloid joints were involved at the time of admission. In the 3 cases of synovial origin the disease remained localised in 2 but spread to the articular surfaces in 1, while in the 4 cases with an osseous focus the disease began in the astragalus in 3 and in the lower end of the tibia in 1. In the 2 tarsal cases the astragalonavicular joint and the first cuneiform bone were the seat of disease respectively.

A history of injury was recorded in 6 cases and 3 gave a family history of tuberculosis. The tuberculin test was positive in every case. Boys were affected more often than girls (B. 6, G. 4) and the left ankle was involved more often than the right in the proportion of 7 to 3. The disease was of recent origin in 4 cases, in 1 it had been present for six months, while in 5 the duration varied from 1 to 5 years, with an average duration of 2 years. Of the latter, 2 were synovial lesions which had received intermittent treatment over the period of one year and 3 were old cases re-admitted with recurrence of activity. Abscesses occurred in 7 cases and in all went on to sinus formation. In 5 the sinuses were already present on admission, while in 2 the sinuses developed during residence. In one case a large sequestrum comprising about half the bone developed in the astragalus. There was one death which occurred 16 days after admission in a female infant with extensive pulmonary disease. The other patients were dismissed in good health with the disease arrested.

Treatment was mainly conservative, operation being required in 3 cases only as follows:—Sequestrectomy, 1; cuneiform excision of the ankle for the correction of the talipes equinus, 1; and incision with scraping, 1. In the early stages Jones's splints were used. Later, immobilisation was secured by plaster appliances, 16 leg plasters being made. To these Böhler's irons were fitted as required. On dismissal more permanent appliances were supplied

in 8 cases as follows:—CertaImid foot splints with patten and crutches, 5; walking irons, 2; special boot, 1. The average duration of residence was 436 days.

6.—*Tuberculosis of Other Joints.*—The incidence of tuberculosis in other joints is relatively low. Among 8 cases dismissed during the year, tuberculosis was found to be present at the joint specified in 6 cases as follows:—Elbow joint, 3; wrist joint, 1; shoulder joint, 1; and sacro-iliac joint, 1. The suggested diagnosis was altered in the other 2 cases. In one wrist case there was found to be osteochondritis of the carpal semilunar (Keinboch's Disease) and in one case suspected of having a sacro-iliac lesion, tuberculosis of the sacrum was diagnosed.

The 3 elbow joint cases each presented disease affecting the articular surfaces of the humerus and ulna. All were deformed with limitation of mobility. Abscess and sinus formation occurred in every case. On dismissal all were healed and the deformity present was improved. A limited range of mobility remained in 2 cases. Celluloid or certaImid appliances were supplied before dismissal. The average duration of residence was 431 days.

The wrist lesion took the form of synovitis of the carpal joints. A duralumin cock-up splint was fitted. No abscess occurred and the patient was dismissed healed with free mobility after a residence of 180 days. In the shoulder joint the lesion was in the metaphysis of the humerus and although an abscess and sinus developed the disease remained extra-articular. Immobilisation was maintained on a duralumin shoulder-abduction splint. The patient was dismissed healed with free mobility at the shoulder after a residence of 495 days. The patient with disease in the sacro-iliac joint was re-admitted after a previous irregular dismissal. A large sinus was present on admission and chronic toxæmia led to a fatal result after 495 days' residence.

C.—TUBERCULOSIS OF GLANDS.

The number of cases of glandular tuberculosis reaching hospital continues to be small. During 1937 there were 30 patients dismissed after receiving treatment for glandular lesions. In every

case the cervical gland groups were affected but in one the inguinal glands were also involved. The features of tuberculous lymphadenitis were present in 29 cases and the tubercle bacillus was isolated in 7 of these. In the remaining case the infection was proved to be of pyogenic origin.

Among the tuberculous patients the glandular enlargement was of comparatively recent development in 15 cases, while in 6 the disease had been present for more than 6 months and 8 had been troubled for lengthy periods of more than one year. Previous hospital treatment had been given in 10 cases. A family history of tuberculosis was recorded in 6 cases and 27 gave a positive reaction to tuberculin. Many cases had local septic foci, the teeth being carious in 13 and the tonsils enlarged in 8. These conditions received appropriate treatment.

Abscess formation occurred in 20 cases and sinuses developed in 17 of these. In 18 cases the abscess made its appearance before admission and had already broken down before the patient came under treatment in 11. In 6 cases sinuses developed after admission. The other 2 abscesses developed during residence and did not go on to sinus formation.

All patients received general treatment including heliotherapy. Aspiration of abscesses was carried out in 9 cases and when the skin was involved abscesses were incised and glandular débris removed. Sinuses were scraped in 11 cases. Excision of gland masses was required in 5 cases. Two patients were dismissed irregularly and the others went home in good general health with the disease apparently arrested after an average residence of 228 days.

D.—OTHER FORMS OF NON-PULMONARY TUBERCULOSIS.

The conditions falling under this heading although varied in distribution and type were so few in number that they may be dealt with together. There were dismissed during the year 4 patients with disease of the soft tissues, 4 with disease of the genito-urinary tract and 2 with multiple lesions. Of these, 8 were frankly tuberculous, while 2 were non-tuberculous. One of the latter was suffering from chronic osteomyelitis (multiple) following staphylococcal pyæmia. Despite the removal of several sequestra this

patient died from chronic toxæmia. The other non-tuberculous case had congenital stenosis of the right ureter with hydroureter and hydronephrosis. The kidney and distended ureter were removed and the patient made an uneventful recovery. Of the tuberculous patients, one was irregularly dismissed and one with bilateral renal tuberculosis, in whom one kidney had been removed, was dismissed after a course of tuberculin therapy in fairly good condition although albuminuria persisted and the renal function was poor. The others were dismissed in good health with the disease arrested. Other data relating to these cases will be found in the general table appended.

As in previous years the heading "multiple" was reserved for those few cases in whom two or more lesions of equal magnitude or severity co-existed. It is taken for granted that every bone or joint case has an internal focus of tuberculosis which may not be clinically or radiologically demonstrable. Actually in addition to the two cases admitted with "multiple" lesions 72 (35%) of 205 cases with surgical tuberculosis and 26 (20%) of 129 cases with pulmonary tuberculosis had definite tuberculous foci other than the main focus under which the case was classified. It would serve no useful purpose to slump all these cases into one large "multiple" group.

In addition to tuberculous cases two patients with other conditions were dealt with during the year. One was suffering from non-tuberculous mastoiditis and one had subacute rheumatism.

(2) PULMONARY CONDITIONS.

During 1937 the number of pulmonary cases dismissed was 170. This represents a slight reduction on last year's figure. The total was made up largely of children under 15 years of age of whom there were 138 (68 girls and 70 boys). The remaining 32 patients were adults, all with one exception being females. It was found that of the total, 129 were suffering from some form of pulmonary tuberculosis, while 29 had other pulmonary conditions usually post-pneumonic in nature, and 12 showed no evidence of pulmonary disease. Of the latter 10 were diagnosed as suffering from debility and the other 2 had endocarditis.

The actual conditions found on examination were classified as follows:—

A. TUBERCULOUS GROUP—

1. Acute Broncho-Pneumonic Tuberculosis	3
2. Acute Miliary Tuberculosis	1
3. Bilateral Pulmonary Tuberculosis	52
4. Unilateral Pulmonary Tuberculosis	30
5. Hilum Adenitis	14
6. Hilum Adenitis with Extension into Lungs	5
7. Tuberculous Pleurisy	24
	<hr/>
	129
	<hr/>

B. NON-PULMONARY GROUP—

1. Post-Pneumonic Fibrosis	19
2. Bronchiectasis	4
3. Bronchitis	2
4. Empyema	3
5. Acute Pneumonia	1
6. Other	12
	<hr/>
	41
	<hr/>

A family history of tuberculosis was recorded in 53 of the 129 tuberculous cases and in 12 of the 41 non-tuberculous cases. The tuberculin test (Mantoux) carried out in 133 cases gave a positive reaction in 131. Bacteriological examination of the sputum in 92 cases revealed the presence of tubercle bacilli in 45. Pleural fluid was examined for tubercle bacilli in 12 cases with a positive result in 8 and tubercle bacilli were recovered from stomach washings in 13 of 53 cases in which this method of investigation was adopted.

Treatment was carried out on the usual lines. All patients came under the general sanatorium régime. In 10 cases with unilateral disease pulmonary collapse was induced and maintained by artificial pneumothorax. Suitable courses of treatment with myocrysin were given in 28 cases. Two patients with empyema required surgical treatment and one patient admitted with tuberculous pleurisy, who developed appendicitis during residence, underwent appendicectomy. The response to treatment was on the whole satisfactory. On dismissal the disease was inactive in 122 cases and had reached a

stage of quiescence in 5. Seventeen patients, including one transferred to another institution were dismissed with the disease still active, and 7 children were removed irregularly at the parents' request.

There were 19 deaths (11.2%). All of these occurred in the tuberculous group giving a mortality rate of 15% for this group. Of the deaths 7 occurred in adult females with extensive bilateral disease with cavitation. In one of these the immediate cause of death was a sudden severe hæmoptysis. The remaining 12 deaths occurred in children who were suffering from the more acute forms of the disease. Among these the fatal termination was ushered in by the development of tuberculous meningitis in 5 cases and in 4 cases there was active abdominal tuberculosis in addition to the pulmonary lesion. The average duration of treatment for all cases was 274 days.

(3) ORTHOPÆDIC CONDITIONS.

During the year 56 orthopædic cases were dismissed. The majority of these were admitted through the Willowbank Orthopædic Clinic but 11 cases with second stage poliomyelitis were transferred from Ruchill Hospital and 2 cases were admitted from other sources. The hospital, fully equipped for the treatment of bone and joint tuberculosis, offers every facility for the management of long term orthopædic conditions and the scope for extension in this branch of the work should be noted in view of the declining incidence of surgical tuberculosis to which attention has been drawn from time to time.

Among the 56 dismissed cases the causes of disability were as follows:—Congenital, 14 cases; rickets, 5 cases; infantile paralysis, 25 cases; spastic paralysis, 5 cases; other conditions, 7 cases. In 13 cases the disability present was simple loss of muscle power without deformity but the majority had some degree of deformity, slight in 2 cases, moderate in 22 and of a gross nature in 19.

The nature of the deformity was as follows:—(A) Congenital Deformities—Torticollis, 7; club foot, 4; dislocation of hip, 1; flat foot, 1; and deformity of toe, 1. (B) Rachitic Deformities—Genu valgum, 3; genu varum et valgum, 1; and acute rickets, 1. (C)

Infantile Paralysis—Talipes valgus, 5; talipes equinus, 2; talipes equino-varus, 1; flail foot, 1; extensive loss of power in both legs and trunk, 4; in one arm and one leg, 2; in one leg, 5; in one arm, 4; in trunk only with scoliosis, 1. (D) Spastic Paralysis—Hemiplegia, 1; triplegia with talipes equinus, 1; diplegia with adductor spasm, 1; spastic deformity of foot, 2. (E) Other Conditions—joint deformities following arthritis, 3; hallux valgus, 2; and single cases of achillodynia and chondro-osteo-dystrophy.

Fewer cases than usual required operative treatment. This is accounted for by the large proportion of patients suffering from second stage poliomyelitis, 13 of whom required only physio-therapeutic measures. In addition, similar treatment with splintage was applied, in 3 cases of third stage poliomyelitis, in 2 cases irregularly dismissed, and in single cases of active rickets, achillodynia, hemiplegia and chondro-osteo-dystrophy. In all therefore 22 cases received only physical or mechanical treatment. Of the remainder, 30 patients required operative and manipulative treatment, while 4 patients had manipulations only.

Of the 30 cases operated upon 10 required more than one operation, 43 operations in all being carried out. The nature of these operations is indicated as follows:—Osteotomy, 14; tenotomy, 12; muscle transplantation, 7; muscle side operations, 3; arthrodesis of joints, 4; plastic operations, 2; amputation, 1—total, 43.

Plaster of Paris appliances were required in 30 cases, 51 appliances being made as follows:—38 leg plasters, 7 hip spicæ and 6 fillets. More permanent supporting appliances were supplied before dismissal in 15 cases as follows:—Walking calipers, 5; leg irons, 4; duralmin arm-abduction splints, 4; certalmid spicæ, 2. In 21 cases boots were altered as follows:—Soles raised, 8; soles tilted, 6; metatarsal bars fitted, 5; special boots supplied, 2.

Massage, exercises and electrical treatment were given as required in 51 cases in this group. The total work of the physio-therapeutic staff is recorded elsewhere. Gratifying results were secured in most cases. In 14 the deformity was entirely corrected, 23 were very much improved, 14 were improved and 4 including 2 cases irregularly dismissed were not improved. The average duration of residence was 151 days.

Throughout the year weekly attendances were given at the Willowbank Orthopædic Clinic. There, treatment was continued where necessary, splints were kept in repair or altered as required and new patients were interviewed. The work at the clinic is recorded in the Report on the Medical Inspection and Treatment of School Children.

TREATMENT.

The treatment given was on orthodox lines. Except where contra-indicated all patients received general treatment including heliotherapy and ærotherapy. While this is of particular value in tuberculosis, it is a line of treatment from which patients suffering from any form of chronic disease derive benefit. Tuberculin therapy was utilised where indicated. The local treatment varied with the nature of the case. For bone and joint tuberculosis a rational combination of conservative and operative methods was adopted. Immobilisation which forms the basis of the local treatment of these conditions was secured with the aid of special appliances, in Plaster of Paris and by operation. The pulmonary cases, in addition to general measures, received treatment by artificial pneumothorax and the injection of gold salts. Patients suffering from deformities other than those due to tuberculosis received the usual orthopædic treatment including physio-therapeutic measures, manipulations, fixations, and operations.

Plaster of Paris Work.—During the year 406 plaster appliances and 114 plaster casts were made. The plaster appliances were as follows:—58 jackets, including 12 fillets and 3 minerva jackets, 138 hip spicæ, 199 leg plasters, 5 arm plasters and 6 plaster beds. The plaster casts on which certalmid or celluloid splints were constructed included 40 jackets, 59 hip spicæ, 13 leg casts and 2 arm casts. Böhler's irons were fitted to leg plasters in 15 cases and repairs to plasters were undertaken as required.

Splint Work.—The work of this department includes the making, repairing, fitting, altering and adjusting of splints, appliances, and boots for patients residing in hospital and for a considerable number

of out-patients. In emergencies the splintmakers may be called on to perform other duties notably in connection with the utilisation of the welding plant. During the year there were made 282 new splints and 303 other appliances. In the same period 246 boots were altered and 681 repairs and alterations were carried out. In addition 288 appliances were erected, fitted or adjusted and 72 other jobs were undertaken. The majority of the work was done on behalf of resident patients but 47 of the new splints, 66 alterations to boots and 99 repairs or adjustments of splints were undertaken for the benefit of out-patients. Attendance was given one afternoon each week at the Ashley Street Orthopædic Clinic, and there, alterations and repairs not included in the above figures were carried out. The work of the splint department is shown in greater detail in the following table:—

	Made.			Repaired.		
	In-Patients.	Out-Patients.	Total.	In-Patients.	Out-Patients.	Total.
Certalmid Splints	61	18	79	13	13	26
Celluloid Splints	12	2	14	2	—	2
Aluminium Splints	39	4	43	11	2	13
Iron Splints	76	23	99	44	45	89
Wooden Splints	12	—	12	39	—	39
Leather Splints	2	—	2	13	1	14
Fibre Splints	17	—	17	—	—	—
Plaster Splints Finished ...	16	—	16	6	—	6
Sandals	8	—	8	—	—	—
Boots Altered	180	66	246	18	20	38
Böhler's Irons	10	—	10	—	—	—
Peg Legs	—	—	—	—	6	6
Crutches Padded	2	—	2	—	—	—
Crutch Rubbers Fitted ...	111	12	123	—	—	—
Carriage Fittings	182	—	182	362	—	362
Other Appliances	101	—	101	29	—	29
Appliances Fitted or Adjusted	165	—	165	57	—	57
Other Work	37	—	37	35	—	35
	1,031	125	1,156	629	87	716

The certalmid and celluloid splints included 16 jackets, 56 leg splints and 9 arm splints. The aluminium and iron splints included 53 walking calipers, 27 spinal supports, 7 bed Thomas splints, 8 shoulder abduction splints, 21 hand splints, 11 leg irons, 7 Jones's foot splints, 4 wrist splints and 4 elbow splints.

Surgical Treatment.—During the year 245 operations or manipulations were carried out under general anæsthesia. The majority of these were orthopædic procedures and the total, which included 114 major operations, was made up as follows:—

BONE AND JOINT TUBERCULOSIS—							
Arthrodesis of Hip ...	...	...	...	...	...	...	6
Arthrodesis of Knee ...	...	...	...	...	...	...	5
Excision of Ankle ...	...	...	...	...	...	...	1
Arthrotomy ...	...	...	...	...	...	...	1
Supracondylar Osteotomy ...	...	...	...	...	...	...	5
Sequestrectomy ...	...	...	...	...	...	...	4
Incision of Abscess ...	...	...	...	...	...	...	9
Scraping of Sinus ...	...	...	...	...	...	...	43
Manipulations ...	...	...	...	...	...	...	36
							—
							110
GLANDULAR TUBERCULOSIS—							
Excision of Glands ...	...	...	...	...	...	...	5
Incision of Abscess ...	...	...	...	...	...	...	4
Scraping of Sinus ...	...	...	...	...	...	...	9
							—
							18
ABDOMINAL CONDITIONS—							
Laparotomy ...	...	...	...	...	...	...	1
Appendicectomy ...	...	...	...	...	...	...	1
Splenectomy ...	...	...	...	...	...	...	1
							—
							3
GENITO-URINARY CONDITIONS—							
Nephrectomy ...	...	...	...	...	...	...	1
Pyelotomy ...	...	...	...	...	...	...	1
Lithotrity ...	...	...	...	...	...	...	1
Cystoscopy ...	...	...	...	...	...	...	8
							—
							11
ORTHOPAEDIC CONDITIONS—							
Osteotomy ...	...	...	...	...	...	...	14
Tenotomy ...	...	...	...	...	...	...	12
Tendon Transplantation ...	...	...	...	...	...	...	9
Arthrodesis ...	...	...	...	...	...	...	6
Muscle-Slide Operations ...	...	...	...	...	...	...	2
Amputation ...	...	...	...	...	...	...	1
Drilling for Osteomyelitis ...	...	...	...	...	...	...	3
Reduction of Dislocated Hip ...	...	...	...	...	...	...	3
Manipulations ...	...	...	...	...	...	...	30
							—
							80
MISCELLANEOUS CONDITIONS—							
Tonsillectomy ...	...	...	...	...	...	...	4
Mastoidectomy ...	...	...	...	...	...	...	5
Rib Resection ...	...	...	...	...	...	...	4
Dressings under Anaesthesia ...	...	...	...	...	...	...	10
							—
							23
Total ...							245

In addition, the theatre staff carried out 1,020 surgical dressings.

Physio-therapeutic Department.—At the beginning of the year 48 patients were undergoing courses of physical treatment. During the year 112 further cases were submitted for treatment and 49 cases were discharged. The total number of treatments given was 9,518 made up as follows:—Massage, 5998; medical gymnastics, 3,335; and medical electricity, 185.

Dental Treatment.—During the first nine months of the year the dental treatment was continued by Mr. A. M. MacAlpine, L.D.S., who visited the hospital as formerly, once weekly. On 1st October the work was taken over by a whole-time Dental Officer, Mr. W. H. Bruce, L.D.S., who conducted two sessions weekly till the end of the year. In the course of 57 sessions 288 patients received dental treatment 42 of them requiring general anæsthesia. In all 691 teeth were extracted.

Radiology.—During the year 1,561 patients were examined radiologically, 3,663 skiagraphs being taken and 12 screen examinations being made. The visiting radiologist and the radiographer conducted 52 sessions. The hospital staff undertook 50 additional sessions and carried out emergency work as required.

Laboratory.—There were 1,107 specimens submitted for examination mainly for the presence or absence of the tubercle bacillus. This organism was isolated from 203 cases and was typed by cultural and biological methods. In the pulmonary group of 119 cases it was found to be of the bovine type in 7 cases, that is in 5.8 per cent., while in the non-pulmonary group of 84 cases there were 15 bovine strains, or 17.9 per cent.

Education.—During the session the names of 265 new scholars were added to the admission register, while 262 were discharged. The average number on the roll was 224, with an average daily attendance of 195. As heretofore the children received half-time instruction in the subjects of the ordinary school curriculum, a relatively greater amount of time however being devoted to handicraft work. As the majority of the patients are confined to bed instruction is individual.

A kindergarten class was formed in September last, and to make this possible an additional teacher was appointed. This class is limited to children who are able to get up and so instruction is communal.

J. A. WILSON,
Physician Superintendent.

TABLE No. 1.—SHOWING CASES DISMISSED OR DIED IN HOSPITAL DURING THE YEAR 1937 WITH AGE AND SEX DISTRIBUTION, LOCATION OF DISEASE, CONDITION ON ADMISSION AND DISMISSAL AND AVERAGE DURATION OF RESIDENCE.

Distribution of Disease.	Age and Sex Distribution.				Years.				Condition on Admission.				Condition on Dismissal.																							
	Males.		Females.						General.		Local.		General.			Local.																				
	— 1	— 5	— 10	— 15	— 15	— 10	— 5	— 10	— 15	Total.	Good.	Fair.	Poor.	Very Poor.	Early.	Intermediate.	Advanced.	Healed (Def.).	Very Good.	Good.	Fair.	Poor.	Transferred.	Irregularly Dismissed.	Died.	Not Improved.	Improved.	Much Improved.	Healed.							
Abdomen	...	—	12	13	11	—	36	—	6	17	11	4	38	74	9	27	35	3	—	39	17	18	—	38	24	—	—	—	5	7	8	3	1	62	173	
Spine	...	—	4	7	8	—	19	—	10	6	3	1	20.	39	—	22	14	3	—	23	3	13	—	26	5	3	—	—	—	1	4	5	—	5	29	818
Dactylitis	...	—	5	1	—	—	6	—	4	—	—	1	5	11	—	7	4	—	8	1	2	—	8	—	—	—	—	—	2	1	1	2	—	8	411	
Other Bones	...	—	1	3	5	—	9	—	5	—	2	—	7	16	—	8	7	1	—	12	2	2	—	13	—	—	—	—	1	1	2	—	1	13	417	
Hip	...	—	4	11	8	—	23	—	5	7	11	1	24	47	6	28	11	2	—	22	6	14	5	36	7	—	—	1	3	—	4	—	4	39	640	
Knee	...	—	3	1	5	—	9	—	4	13	7	2	26	35	2	23	9	1	—	13	3	12	7	32	1	—	—	—	—	2	2	—	4	29	528	
Ankle and Tarsus	...	—	2	4	1	—	7	—	2	—	2	—	4	11	1	7	2	1	—	4	1	6	—	9	1	—	—	—	—	1	1	—	—	10	436	
Sacro-Iliac	...	—	1	—	—	—	1	—	—	—	1	—	1	2	—	1	1	—	1	1	—	—	—	—	—	—	—	—	—	—	1	—	—	1	1186	
Shoulder	...	—	1	—	—	—	1	—	—	—	—	—	1	—	—	1	—	—	—	2	—	—	—	3	—	—	—	—	—	—	—	—	—	1	495	
Elbow	...	—	—	1	—	—	1	—	—	—	1	1	2	3	—	2	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	3	431	
Wrist and Carpus	...	—	—	1	—	—	1	—	—	—	1	—	1	2	—	—	2	—	—	—	2	—	—	2	—	—	—	—	—	—	—	—	—	2	303	
Other Joints	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Cervical Glands	...	1	2	4	5	—	12	—	7	7	4	—	18	30	2	19	8	1	—	17	4	9	—	14	14	—	—	—	2	—	1	1	1	27	228	
Skin and Soft Tissues	...	—	1	1	—	—	2	—	—	1	1	—	2	4	—	2	2	—	2	1	1	—	4	—	—	—	—	—	—	—	—	—	—	4	254	
Genito-Urinary	...	—	1	1	1	—	3	—	—	—	—	1	1	4	—	3	1	—	—	2	—	2	—	1	1	1	—	—	1	—	—	—	1	2	768	
Pulmonary	...	3	16	29	22	1	71	—	20	19	29	31	99	170	20	74	76	—	21	2	147	—	90	53	—	—	1	7	19	43	—	5	122	274		
Multiple	...	—	—	—	1	—	1	—	—	—	1	—	1	2	—	1	1	—	1	1	—	—	—	—	—	—	—	—	—	1	1	2	—	—	910	
Orthopaedic	...	—	5	13	13	—	31	—	7	7	10	1	25	56	15	35	6	—	12	2	42	—	39	15	—	—	—	—	2	—	5	14	23	14	151	
Other	...	—	—	—	1	—	1	—	—	—	—	1	1	2	—	1	1	—	1	—	—	—	2	—	—	—	—	—	—	—	—	—	—	2	42	
Total	...	4	57	90	82	1	234	—	70	78	84	43	275	509	55	260	182	12	—	181	45	271	12	319	122	4	—	2	25	37	75	21	45	368	358	

BELLEFIELD SANATORIUM.

During 1937 the routine work of this Sanatorium was carried on without untoward occurrence.

In course of the year 180 patients were discharged home—one fewer than previous year—after varying periods of treatment.

The type of patient received was, as in former years, mainly that showing well defined pulmonary tuberculosis of some extent. Tables, in the form required, are submitted. These show that relatively few cases of "Early" disease were received for treatment; the majority being of the "Intermediate" type.

Of the total number eight only showed the disease to be in an advanced state. Two deaths occurred in this group, one improved somewhat, but the remainder did not in any way respond to treatment.

A slight increase over last year in the number of "Early" cases dealt with was recorded, a point which may augur well for the future, but the proportion of "Early" cases to the total continues to be disappointingly small. Fewer children were received for treatment; which fact occasions regret as children respond very satisfactorily on the whole to treatment in this Sanatorium.

Treatment in the main was along the usually accepted lines, and it may be safely said that a very reasonable response was made by the majority of patients treated. The induction of Artificial Pneumothorax continues to prove a means of treatment very definitely beneficial in those cases where it can be successfully established. Relatively few inductions were however possible as the type of case received did not readily lend itself as a possible subject. Twenty-one attempts to induce Artificial Pneumothorax were made, 20 were successful, one was a failure. In all 375 refills were given.

The health of the staff was well maintained throughout the year and little time was lost through sickness.

A satisfactory supply of vegetables, eggs and poultry was received from the garden and poultry farm.

BELLEFIELD SANATORIUM.—TUBERCULOSIS.—TABLE
SHOWING STAGE OF DISEASE, AGE, RESULT OF TREATMENT,
&C., OF PATIENTS DISMISSED DURING YEAR 1937.

Age Group.	Result of Treatment.					Work or School.	Reasons for Dismissal.		Result of Sputum Examination.					Complica- tions.																																																																																									
	Arrested.	Much Improved.	Improved.	Not Improved.	Died.	Less than 4 Weeks.	Fit.	Unfit.	Own accord.	Other reasons.	Transferred.	Admitted +. Discharged +.	Admitted +. Discharged -.	Admitted -. Discharged -.	Admitted -. Discharged +.	No Spit.	Tubercular.	Other.	Totals.																																																																																				
Early Cases—																																																																																																							
— 5 ...	—	1	1	—	—	—	—	2	—	—	2	—	—	—	—	2	2	—	2																																																																																				
—15 ...	—	4	2	—	—	—	6	—	5	1	—	—	—	1	—	5	—	—	6																																																																																				
—20 ...	—	3	7	—	—	—	10	—	8	2	—	—	—	—	1	9	—	—	10																																																																																				
—25 ...	—	2	4	1	—	1	6	1	6	1	—	—	1	—	—	6	—	—	7																																																																																				
—35 ...	—	1	7	—	—	—	8	—	8	—	—	—	—	1	—	7	—	—	8																																																																																				
+35 ...	—	1	1	—	—	—	2	—	2	—	—	—	—	1	—	1	—	—	2																																																																																				
Totals ...	—	12	22	1	—	1	32	3	29	4	2	—	1	3	1	30	2	—	35																																																																																				
Intermediate—																																																																																																							
—15 ...	—	1	—	—	—	—	1	—	—	1	—	—	—	—	—	1	—	—	1																																																																																				
—20 ...	—	4	17	2	—	—	16	7	20	3	—	3	2	6	1	11	—	—	23																																																																																				
—25 ...	—	6	26	4	—	—	25	11	35	1	—	5	4	10	1	16	—	1	36																																																																																				
—35 ...	—	3	50	8	—	—	38	23	61	—	—	14	5	12	8	22	—	—	61																																																																																				
—45 ...	—	1	7	2	—	—	7	3	10	—	—	2	—	3	—	5	—	—	10																																																																																				
+45 ...	—	—	6	—	—	—	4	2	6	—	—	2	—	1	—	3	—	—	6																																																																																				
Totals ...	—	15	106	16	—	—	91	46	132	5	—	26	11	32	10	58	—	1	137																																																																																				
Advanced—																																																																																																							
—15 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																																																																																				
—20 ...	—	—	—	3	2	—	—	3	3	—	—	1	—	1	1	—	—	—	5																																																																																				
—25 ...	—	—	1	2	—	—	—	3	2	—	1	3	—	—	—	—	—	—	3																																																																																				
—35 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																																																																																				
+45 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																																																																																				
Totals ...	—	—	1	5	2	—	—	6	5	—	1	4	—	1	1	—	—	—	8																																																																																				
<table><tr><th rowspan="2">Class.</th><th rowspan="2"></th><th colspan="2">Number Dismissed.</th><th colspan="2">Number of Deaths.</th><th colspan="5">Duration of Residence—Days.</th><th colspan="4"></th></tr><tr><th></th><th></th><th>—30</th><th>—50</th><th>—100</th><th>—150</th><th>—200</th><th>—300</th><th>+300</th><th colspan="4"></th></tr><tr><td>Early ...</td><td>...</td><td>35</td><td>—</td><td>2</td><td>—</td><td>10</td><td>9</td><td>3</td><td>3</td><td colspan="4"></td></tr><tr><td>Intermediate</td><td>...</td><td>137</td><td>—</td><td>1</td><td>2</td><td>34</td><td>33</td><td>24</td><td>21</td><td colspan="4"></td></tr><tr><td>Advanced ...</td><td>...</td><td>8</td><td>2</td><td>—</td><td>—</td><td>—</td><td>2</td><td>2</td><td>—</td><td colspan="4"></td></tr><tr><td>Totals...</td><td>...</td><td>180</td><td>2</td><td>3</td><td>2</td><td>44</td><td>44</td><td>29</td><td>24</td><td colspan="4"></td></tr></table>																				Class.		Number Dismissed.		Number of Deaths.		Duration of Residence—Days.											—30	—50	—100	—150	—200	—300	+300					Early	35	—	2	—	10	9	3	3					Intermediate	...	137	—	1	2	34	33	24	21					Advanced	8	2	—	—	—	2	2	—					Totals...	...	180	2	3	2	44	44	29	24				
Class.		Number Dismissed.		Number of Deaths.		Duration of Residence—Days.																																																																																																	
				—30	—50	—100	—150	—200	—300	+300																																																																																													
Early	35	—	2	—	10	9	3	3																																																																																														
Intermediate	...	137	—	1	2	34	33	24	21																																																																																														
Advanced	8	2	—	—	—	2	2	—																																																																																														
Totals...	...	180	2	3	2	44	44	29	24																																																																																														

PART III.

OUTDOOR MEDICAL SERVICE.

By Dr. R. J. Peters.

The Outdoor Medical Service is now under the full-time system with the exception of the Maryhill district and certain outlying areas in which it has not so far been found to be economical to disturb the existing part-time arrangements.

Staff.—Three new appointments were made to the medical staff during the year. There was one resignation. The total staff employed in the service is now 29 medical officers (full-time), 8 medical officers (part-time), 20 nurses, 13 clerkesses, and 14 pharmacists. In the Annual Report for 1936, a complete and detailed account was given of the method of working the Outdoor Service. No changes have been made since then in the general scheme of administration.

The work done by the medical officers is shown in the table on the following page.

The amount of medical work has increased year by year since 1931. The number of domiciliary visits and consultations at the clinics during 1937 was considerably in excess of those in the previous year. Ninety per cent. of the work shown in the table was done by the whole-time medical staff. The remaining ten per cent. represents treatment by part-time medical officers, who still continue to serve in the more outlying areas. The reduction in the number of able-bodied persons and their dependants is related to the reduction in numbers on the able-bodied register of the Public Assistance Department consequent upon the Unemployment Assistance Board taking over responsibility for a large section of that group. The dependants of persons in receipt of relief from the Unemployment Assistance Board now come under the heading of ordinary applicants for relief.

A considerable amount of the time of the medical officers is now taken up in the issue of certificates for various purposes. For example, before Public Assistance relief is given, a medical certificate is required.

OUTDOOR MEDICAL SERVICES. SHOWING COMPARISON OF WORK DONE BY THE OUTDOOR MEDICAL OFFICERS DURING THE YEARS 1931-1937 INCLUSIVE.

Year.	Visits.				Consultations.				Sessions at Public Assistance Department Offices.	Number of Units.*
	Persons or their Dependents		Statutory Visits to Mental Defectives.		Persons or their Dependents		Total.			
	Able-bodied Relief.	Ordinary Applicants.	Ordinary Applicants.	Total.	Able-bodied Relief.	Ordinary Applicants.	Total.			
1931	...	3,472	19,758	1,153	24,383	18,383	88,330	106,713	1,708	171,941
1932	...	5,044	25,115	1,368	31,527	26,054	115,110	141,164	1,709	224,254
1933	...	4,674	21,845	1,686	28,205	25,459	134,104	159,563	1,702	234,330
1934	...	8,520	32,723	1,804	43,047	34,106	171,985	206,091	1,707	317,976
1935	...	7,277	32,137	1,934	41,348	38,367	210,608	248,975	1,712	356,625
1936	...	11,932	47,811	2,015	61,758	45,090	240,013	285,103	1,622	443,553
1937	...	5,776	64,898	2,184	72,858	23,926	278,634	302,560	1,148	487,575

In addition, during 1937, the Medical Officers carried out the undernoted works: —

No. of Vaccinations performed	...	...	...	...	...	...	1,551
No. of Vaccinations postponed through illness	...	...	...	...	...	...	1,628
No. of Cases of Returned Insusceptible to Vaccination	...	...	...	...	...	...	103

*One consultation at a clinic = 1 unit
 One domiciliary visit ... = 2½ units
 One session at Public Assistance Department Office = 2½ "

Also the Unemployment Assistance Board gives allowances for extra nourishment in cases where there is a possible medical reason for so doing. These allowances are paid in cash, so that to many recipients of Unemployment Assistance a medical certificate in respect of a dependant may mean an increase in the scale of payment. Certificates are also required where there is doubt as to the fitness for work or otherwise of a patient, the case then being referred to an Outdoor Medical Officer. Differences of opinion may arise on any of these points, so that arrangements have been made for the holding of sessions at Stobhill Hospital where difficult cases can be reviewed by an independent Refereeing Board.

Seasonal variations occur in the work of the Outdoor Medical Officers. Visits rise in the winter to a peak 100 per cent. above the mean for the year and fall to 50 per cent. of the mean during the month of July. Consultations at the clinics fluctuate between 25 per cent. above and 25 per cent. below the mean. The great pressure of work in the winter, therefore, arises from the demand for domiciliary visits in cases of acute illness.

Premises.—The new clinic at Florence Street was completed and opened during the year. Incorporated in the same building is a new tuberculosis clinic with an X-ray department on the first floor. The new clinic at Redan Street, Bridgeton, was opened early in the year.

The following is a list of premises for which plans have been prepared :—

- Govan Town Hall—Joint Clinic.
- Maryhill—Joint Clinic.
- Sandy Road, Partick—Joint Clinic.
- Crail Street—Outdoor Medical Service Clinic.
- Denmark Street, Possilpark—Joint Clinic.
- Killearn Street, Possilpark—Outdoor Medical Service Clinic.
- Seaward Street, Kinning Park—Joint Clinic.

The plans for some of these clinics had been completed in 1936, but further progress has been held up. It is now, however, anticipated that building operations in some will soon be commenced.

GENERAL HOSPITALS.

In the Annual Report, 1936, a complete account of the General Hospital Services of the Corporation was given. The plan of administration remains unchanged.

Table A shows the number of beds available in the hospitals for the year now under review. Pressure on hospital accommodation has become gradually more acute, and towards the end of the year a waiting list had to be established for the first time. A circular letter was addressed to practitioners, advising them of the difficulties in finding accommodation, and asking them to assist by giving domiciliary treatment wherever possible, particularly to chronic patients. The circular letter, however, made no appreciable difference.

It is interesting to note that admissions by certificate of the Outdoor Medical Officers are forming a decreasing proportion of the total admissions. In other words, Outdoor Medical Officers are treating more of their patients at home while private practitioners are tending to send more cases to hospital. In 1932, 9,677 patients were admitted on the certificate of an Outdoor Medical Officer, whereas in 1937 the figure was 6,698. Private practitioners, however, sent in 7,821 patients in 1932 and 13,146 in 1937.

Table B shows the admissions, dismissals, deaths, etc., in the Corporation General Hospitals from 1931 to 1937. The number of admissions continues to increase year by year and the average days' residence per patient is slightly reduced.

Table C gives the admissions, dismissals, deaths, and cases remaining in the hospitals month by month for the year 1937.

Table D shows the method of admission of patients. It will be noted from this table that over 13,000 patients were admitted on a certificate from a general practitioner other than a District Medical Officer. Again, slightly more than 10 per cent. of the admissions were gate admissions, that is, cases where the patient presented himself for treatment at the admission room of the hospital. These two methods of admission account for slightly more than half of the total.

In view of the difficulty in finding beds for all these patients, a strict administrative control has to be maintained over admissions in order to preserve sufficient accommodation to deal with the legitimate poor for whom the Corporation is responsible. Much of the difficulty regarding accommodation is due to the accumulation of chronic and infirm patients in the hospitals. These patients occupy beds for very long periods as a rule, and there is a growing public demand for institutional treatment and care for such cases.

Table E shows the disposal of patients dismissed.

TABLE A.
GENERAL HOSPITALS—ACCOMMODATION.

	Total Accommodation.	Medical Surgical and Special.	Mental Observation.	Maternity.		Sick Children.	Healthy Children.	Lunatics.
				Beds.	Cots.			
Stobhill Hospital ...	1,867	1,135	278	70	56	160	168	—
Marion Reid Home ...	70	—	—	—	—	—	70	—
Eastern District Hospital ...	327	237	50	18	22	—	—	—
Western District Hospital ...	294	230	—	32	32	—	—	—
Southern General Hospital ...	1,606	968	128	32	34	55	—	389
	4,164	2,570	456	152	144	215	238	389

TABLE B.

TABLE SHOWING COMPARISON OF ADMISSIONS, DISMISSALS, DEATHS, AND IN-PATIENT DAYS IN THE CORPORATION GENERAL HOSPITALS DURING 1931, 1932, 1933, 1934, 1935, 1936, AND 1937.

Hospital.	Year.	Admissions.	Dismissals.	Deaths.	In-Patient Days.	Average Days' Residence.	Percentage of Deaths to Dismissals.
Stobhill ...	1931	11,266	9,677	1,484	569,064	50.99	15.3
	1932	14,213	12,255	1,718	625,070	44.73	14.0
	1933	13,812	12,319	1,555	610,820	44.03	12.6
	1934	14,420	12,819	1,609	614,903	42.62	12.6
	1935	14,208	12,419	1,683	632,268	44.83	13.6
	1936	13,452	11,842	1,676	645,649	47.76	14.2
	1937	14,054	12,396	1,803	634,859	44.71	14.5
Eastern District ...	1931	3,225	2,880	348	99,178	30.72	12.1
	1932	3,720	3,354	364	101,867	27.40	10.8
	1933	3,961	3,518	440	100,255	25.33	12.5
	1934	3,855	3,372	478	103,057	26.77	14.2
	1935	4,001	3,480	499	108,882	27.36	14.3
	1936	3,666	3,214	479	114,572	31.02	14.9
	1937	3,764	3,236	470	114,475	30.89	14.5
Western District ...	1931	4,168	3,925	238	82,276	19.76	6.1
	1932	5,042	4,708	334	85,642	16.99	7.1
	1933	4,428	4,100	300	78,591	17.86	7.3
	1934	5,139	4,833	314	86,743	16.85	6.5
	1935	5,534	5,182	338	91,593	16.59	6.5
	1936	5,383	5,019	335	91,437	17.08	6.7
	1937	5,321	5,001	357	91,914	17.15	7.1
Southern General ...	1931	3,483	2,864	686	204,333	57.56	24.0
	1932	4,077	3,331	679	197,774	49.32	20.4
	1933	3,942	3,259	751	192,916	48.11	23.0
	1934	4,067	3,304	763	182,586	44.89	23.1
	1935	4,678	3,754	883	189,263	40.81	23.5
	1936	7,020	5,706	1,232	217,183	31.30	21.5
	1937	7,245	6,028	1,218	232,096	32.03	20.2
Totals ...	1931	22,142	19,346	2,756	954,851	43.20	14.2
	1932	27,052	23,648	3,095	1,010,353	37.78	13.1
	1933	26,143	23,196	3,046	982,582	37.44	13.1
	1934	27,481	24,328	3,164	987,289	35.90	13.0
	1935	28,421	24,835	3,403	1,022,006	36.19	13.7
	1936	29,521	25,781	3,722	1,068,841	36.23	14.4
	1937	30,384	26,661	3,848	1,073,344	35.18	14.4

TABLE C.

SUMMARY OF ADMISSIONS, DISMISSALS, AND DEATHS FOR THE YEAR
ENDED 31ST DECEMBER, 1937.

	Admitted.	Dismissed.	Died.	Remaining	Days' Residence.
January	2,788	2,213	503	3,011	95,140
February	2,196	2,023	317	2,867	81,761
March	2,531	2,200	337	2,861	90,445
April	2,716	2,283	276	3,018	88,941
May	2,530	2,316	306	2,926	92,186
June	2,526	2,263	267	2,922	89,277
July	2,249	2,193	236	2,742	86,862
August	2,441	2,099	264	2,820	86,397
September	2,505	2,135	272	2,918	85,503
October	2,703	2,255	298	3,068	91,952
November	2,647	2,369	352	2,994	91,829
December	2,552	2,312	420	2,814	93,051
	30,384	26,661	3,848	—	1,073,344

TABLE D.

TABLE SHOWING THE METHOD OF ADMISSION OF ALL CASES DISMISSED
FROM THE GENERAL HOSPITALS DURING THE YEAR.

Method of Admission.	Stobhill Hospital.	Eastern District Hospital.	Western District Hospital.	Southern General Hospital.	Total.
On certificate of District Medical Officer	3,323	617	338	2,420	6,698
On certificate of other practitioner ...	8,166	878	959	3,143	13,146
Per hospital consultant	99	37	16	23	175
Per specialist clinic	15	33	14	177	239
Transferred from other Corporation					
General Hospital	137	9	6	14	166
From infectious disease hospital ...	159	—	2	14	175
From voluntary hospital	115	46	6	68	235
From poorhouse	113	—	—	215	328
From Maternity Hospital (including overflows)	502	2	1	6	511
Gate admissions	34	1,501	1,688	297	3,520
Arrangements with other Authorities	32	1	2	38	73
Born in hospital (legitimate)	1,110	512	885	711	3,218
Born in hospital (illegitimate)	138	40	84	75	337
Per Public Assistance Department ...	91	—	—	6	97
Per prison or police	96	28	—	12	136
From asylums	30	—	—	22	52
Per Education Health Service	—	—	1,357	2	1,359
Per Tuberculosis Officer, etc.	5	—	—	—	5
Others	34	2	—	3	39
	14,199	3,706	5,358	7,246	30,509

TABLE E.

TABLE SHOWING DISPOSAL OF CASES DISMISSED FROM THE GENERAL HOSPITALS DURING THE YEAR ENDED 31ST DECEMBER, 1937.

To—		To—	
Own home	24,395	Tuberculosis Hospital ...	80
Other Corporation General Hospitals	116	Poorhouse	613
Asylum	414	Own Parish	10
Convalescent Home	9	Public Assistance Dept. ...	84
Voluntary Hospital	6	Police	28
Out-patient Clinic	162	Boarded-out	335
Infectious Disease Hospital	366	Died	3,848
		Others	43
			<hr/> 30,509 <hr/>

Out-Patient Clinics.—It is proposed that a large out-patient centre should be built on ground which has been acquired adjacent to the Eastern District Hospital. In this centre it will be possible to arrange for the follow-up of patients dismissed from the various Corporation General Hospitals and to arrange for specialist consultations for cases referred by District Medical Officers.

Dental Treatment.—During the year two full-time dentists were appointed to undertake the dental treatment of patients in general hospitals. These newly appointed officers replaced the part-time dentists. These appointments have fully justified themselves by the reduced costs which have resulted.

Staff—Medical and Surgical.—During the year new appointments were made to the visiting staffs of the general hospitals as follows :—

One Physician.
 One Assistant Physician.
 Two Assistant Surgeons.
 One Aurist.
 Three Assistant Aurists.
 Two Assistant Gynaecologists.
 Two Dentists (Full-time).
 One Assistant Dermatologist.
 One Ophthalmologist.

Arrangements were also made for the Superintendent of Stoneyetts Hospital to act as neuro-psychiatrist at the Southern General Hospital.

The following table gives the numbers of visiting consultants to the general hospitals :—

	Stobhill Hospital.	Eastern District Hospital.	Western District Hospital.	Southern General Hospital.
Visiting Physicians	4	1	1	1
Assistant Visiting Physicians ...	—	—	—	1
Visiting Surgeons	1	1		1
Assistant Visiting Surgeons	1	1		1
Visiting Gynaecologists and Obstetri- cians	1	1		
Assistant Visiting Gynaecologists and Obstetricians	1	1		
Visiting Psychiatrists	2	1	—	1
Visiting Aurists and Laryngologists ...		1		
Assistant Visiting Aurists and Laryn- gologists		5		
Visiting Dermatologists	1	—	—	—
Assistant Visiting Dermatologists ...	—	—	—	1
Ophthalmologists	1	—	—	1
Radiologists		1		
Assistant Radiologists		1		
Dentists		1		1

The newly appointed physician is Professor Noah Morris, who, at the commencement of the winter University session, took up the duties of the combined post of Professor of Pharmacology and Materia Medica and Visiting Physician to Stobhill Hospital. The unit thus created is already making itself a valuable asset to the teaching of medical students in Glasgow.

Hospital Statistics.—Three tables giving statistics of the general hospitals are placed in the Appendix to this section of the Report. Appendix Table I gives a short classification of diseases dealt with. Appendix Table II gives a more extended classification, showing the age distribution of the patients. Appendix Table III gives the number of operations performed in the general hospitals during the year, and shows whether the operation was performed with a general or spinal anaesthetic, with a local anaesthetic, or without anaesthetic.

Pathological Department and Laboratories.—Table F gives a summary of the work of this department during the year. In each branch of laboratory work there was a substantial increase over the previous year.

TABLE F.

<i>Pathology—</i>	
Number of autopsies	452
Reports issued to wards on specimens submitted ...	680
<i>Bacteriology and Biochemistry—</i>	
Reports issued to wards on specimens submitted ...	9,951
Wassermann Reactions and Kahn Tests	13,757

Refereeing of Cases, Specialist Examinations, etc.—The total number of patients referred to Stobhill Hospital for further opinion as to fitness for work was 1,055, while at the Southern General Hospital 658 patients were reviewed at the instance of the Public Assistance Department to decide whether artificial dentures should be provided. In addition to these cases, large numbers of out-patients were seen by the visiting consultants, particularly at Stobhill Hospital and at the Southern General Hospital.

Electro-Medical Department.—The Electro-Medical Department at Stobhill Hospital was altered and re-equipped during the year. The department can now be considered up-to-date and capable of dealing with large numbers of patients. The following table, Table G, shows the amount of work done in this department.

TABLE G.

No. of radiographic films taken	13,291
No. of barium meals given	1,179
No. of deep X-ray therapy treatments	1,151
No. of treatments by radium	69
No. of sunlight treatments given	4,765
No. of cases treated by massage	2,369
No. of massage treatments given	30,274
No. of cases treated by electricity	599
No. of electrical treatments given	9,450
Total treatments given	45,709

Deaths in Hospital.—3,848 deaths occurred in hospital during the year, giving a case mortality of 12·61 per cent. 898 patients died within 48 hours of admission to hospital. The following table, Table H, shows the main causes of death of these patients.

TABLE H.

Cause of Death in Hospital.	No. of Deaths.
Acute Pneumonia	115
Acute Bronchitis	13
Chronic Bronchitis	86
Cardiac Disease	144
Cerebral Haemorrhage or Thrombosis	89
Diseases of the Digestive System	68
Malignant Disease	35
Violence	5
Congenital Debility and other Diseases of Early Infancy	106
Other Causes	237
	<hr/> 898 <hr/>

OBSTETRICAL SECTION.

The obstetrical departments in the general hospitals were working to full capacity throughout the year. The number of patients delivered in hospital was 3,710, an increase of 321 compared with the previous year. Table J shows the number of cases dealt with since 1930. It will be seen that a steady increase has taken place in the total cases but this year the number of abortions treated shows a decrease compared with 1936. The average duration of stay of obstetrical patients in hospital was 15·7 days.

TABLE J.

			Ante-Natal Cases.	Cases Delivered in Hospital.	Cases Admitted after Delivery Outside.	Abortions.	Total.
1930 (7 months)	...	...	183	897	32	134	1,246
1931	...	...	330	1,828	25	294	2,477
1932	...	...	517	2,430	49	597	3,593
1933	...	...	576	2,582	71	709	3,938
1934	...	...	644	3,103	81	746	4,574
1935	...	...	607	3,017	63	1,065	4,752
1936	...	...	832	3,389	95	1,131	5,447
1937	...	...	750	3,710	88	913	5,461

Groups shown as a Percentage of each Year's Total.

1930 (7 months)	...	...	14·7	71·9	2·6	10·8	100
1931	...	...	13·3	73·8	1·0	11·9	100
1932	...	...	14·4	67·6	1·4	16·6	100
1933	...	...	14·6	65·6	1·8	18·0	100
1934	...	...	14·1	67·8	1·8	16·3	100
1935	...	...	12·8	63·3	1·3	22·3	100
1936	...	...	15·3	62·2	1·7	20·8	100
1937	...	...	13·7	68·0	1·6	16·7	100

Table K shows the number of cases delivered in each of the four hospitals and their disposal. It also shows the method of admission of these cases and the numbers admitted for treatment during the ante-natal period.

88 patients were admitted after having been delivered outside. 32 patients who were delivered in hospital died, giving a mortality rate of 8·6 per 1,000 births in hospital. 364 patients were admitted during the ante-natal period; 2,873 were admitted directly to the labour wards; and, in addition, 473 were admitted as normal cases in accordance with the arrangements in operation between the Corporation and the Glasgow Royal Maternity Hospital. The number of births in hospital, including still-births, was 3,741, and of these, 3,393 infants were dismissed alive from hospital.

Of the patients delivered in hospital, 2,627 or 70·8 per cent. were regarded as cases of normal parturition. In these the average duration of stay was 12·0 days, which is slightly more than in the previous year.

TABLE K.
GENERAL HOSPITALS—OBSTETRICAL SECTIONS.

DISMISSALS DURING 1937.						
		Stobhill Hospital.	Eastern District Hospital.	Western District Hospital.	Southern General Hospital.	Total.
<i>Cases Delivered in Hospital—</i>						
Dismissed well	1,281	559	1,011	782	3,633	
Died in Hospital	21	—	1	10	32	
Transferred	4	16	5	20	45	
Total dismissals of cases delivered in Hospital	1,306	575	1,017	812	3,710	
<i>Method of Admission of above Cases—</i>						
Admitted during ante- natal period for treat- ment and delivered in Hospital	141	39	65	119	364	
Admitted to labour ward	694	535	952	692	2,873	
Admitted to labour ward (via Glasgow Royal Maternity Hospital)	471	1	—	1	473	
Total	1,306	575	1,017	812	3,710	
<i>Cases admitted during ante- natal period—Dismissed undelivered</i>						
	252	109	113	276	750	
<i>Cases admitted after de- livery</i>						
	46	2	4	36	88	
<i>Abortions and Miscarriages</i>						
	473	68	65	307	913	
<i>Infants dismissed alive</i>						
„ still-born	1,189	516	929	759	3,393	
„ neo-natal deaths	65	29	59	35	188	
	57	36	40	27	160	
Total	1,311	581	1,028	821	3,741	

The following table (TABLE L) shows details of patients who were admitted for ante-natal treatment but dismissed undelivered from hospital. In addition to these, 364 patients were admitted to the ante-natal wards, treated there, and delivered in hospital. Their average duration of stay was 41·5 days. Toxaemias of pregnancy accounted for 43 per cent. of this group, and 49 per cent. were admitted because of concurrent diseases independent of pregnancy. The remainder were mainly instances of malpresentation or contracted pelvis where difficult labour was anticipated.

TABLE L.

REASON FOR ADMISSION OF CASES ADMITTED TO ANTE-NATAL WARD
AND DISMISSED UNDELIVERED.

<i>Toxaemias of Pregnancy—</i>						
Hyperemesis	...	...	...	...	...	67
Albuminuria	...	...	...	...	...	148
Eclampsia	...	...	...	...	...	2
						<hr/> 217
<i>Abnormal Presentation or Disproportion—</i>						
Breech Presentation	...	...	...	...	...	12
Transverse Presentation	...	...	...	...	...	2
Twin Pregnancy	...	...	...	...	...	3
Contracted Pelvis	...	...	...	...	...	7
Large or Abnormal Child	...	...	...	...	...	1
						<hr/> 25
<i>Concurrent Diseases independent of Pregnancy—</i>						
Cardiac Disease	...	...	...	...	...	23
Renal Disease	...	...	...	...	...	12
Pulmonary Tuberculosis	...	...	...	...	...	8
Other Respiratory Diseases	...	...	...	...	...	87
Other Diseases	...	...	...	...	...	145
						<hr/> 275
<i>Other Reasons</i>	...	...	...	...	...	233
						<hr/> 750
Total	...	...	...	...	...	<hr/><hr/>750

Complications of pregnancy or parturition noted in 538 cases were as follows :—

TABLE M.

Toxaemias of Pregnancy	...	...	...	...	...	155
Abnormal Presentation	...	...	...	...	...	118
Disproportion	...	...	...	...	...	59
Placenta Praevia	...	...	...	...	...	16
Others	...	...	...	...	...	190
						<hr/> 538
Total	...	...	...	...	...	<hr/><hr/>538

37 pregnant women suffering from pulmonary tuberculosis were admitted for treatment, and 29, including 6 abortions, terminated their pregnancy in hospital. Among the other concurrent conditions were renal disease, 3 ; respiratory diseases, 30 ; and other conditions, 44.

Puerperal Fever and Pyrexia.—Table N shows, after adjustment made in respect of patients for whom the hospital had no responsibility for confinement, the number of cases of fever and pyrexia together with the total number of deaths. These figures include all patients who sickened or died from puerperal fever or from some condition associated with puerperal pyrexia *either before or after dismissal* from hospital. The total number of deaths associated with pregnancy was 50, but 1 death from non-septic cause has been excluded because the patient was delivered

outside of hospital and was not in any way connected with the hospital prior to her admission. She had received no treatment in hospital for her pregnancy. There were 9 deaths from puerperal sepsis during the year which could be allocated to the hospitals, and this gives a case mortality of 9·8 per cent. Over all, the hospitals the mortality rate from puerperal fever or puerperal sepsis was 2·5 per 1,000 births.

TABLE N.

Hospital.	No. of Cases.		Cases per 1,000 Births.		No. of Deaths.		Deaths per 1,000 Births.		Case Mortality.
	Fever.	Pyrexia.	Fever.	Pyrexia.	Fever.	Non-Septic.	Fever.	Non-Septic.	
Stobhill ...	54	29	43·3	23·2	7	23	5·6	18·4	13·0
Eastern District ...	16	6	27·0	10·1	—	—	—	—	—
Western District ...	7	4	6·9	4·0	—	3	—	3·1	—
Southern General ...	15	16	18·0	19·2	2	14	2·5	17·8	13·3
	92	55	25·1	15·0	9	40	2·5	11·3	9·8

Of the total number of abortions treated, namely, 913, there were 11 deaths, or 12·0 per 1,000.

As shown in Table N, there were 40 deaths from non-septic causes. 4 of these were patients who died undelivered from causes as stated below :—

Bronchitis, Asthma, and Pneumonia	...	...	...	1
Malpresentation, Obstructed Labour	...	...	...	1
Hyperemesis	...	...	...	1
Eclampsia	...	...	...	1

14 patients died after delivery from complications of pregnancy, as follows :—

Haemorrhages, including Ante-Partum, Placenta Praevia, and Post-Partum	...	...	...	...	1
Toxaemias of Pregnancy	...	...	...	...	7
Others	...	...	...	...	6

14 patients died from diseases concurrent with pregnancy. 6 of these deaths were due to pneumonia; 4 to pulmonary tuberculosis; 1 to dysentery and bronchitis; 1 to cardiac disease; and 2 to chronic nephritis.

The remaining 8 non-septic deaths occurred in cases of abortion and were attributed to the following causes :—

Hyperemesis; Hysterectomy	...	...	...	...	2
Broncho-Pneumonia	...	...	...	...	1
Collapse (Autopsy showed haemorrhage into adrenals)	...	...	...	...	1
Appendicitis, General Peritonitis	...	...	...	...	1
Haemorrhage, Adherent Placenta	...	...	...	...	1
Cardiac Disease	...	...	...	...	1
Shock	...	...	...	...	1

The number of obstetric operations performed in the hospital totalled 1,592, and these are classified as follows:—

Craniotomy	10
Caesarean Section	57
Forceps Delivery	177
Induction of Labour	98
Manual Removal of Placenta	47
Curettage	671
Perineal Repair	475
Others	57

Ante-Natal Supervision.—Of the patients admitted to the obstetrical sections, 24·0 per cent. are reported as having had no ante-natal care ; 55·9 per cent. attended a Corporation ante-natal clinic ; and 6·4 per cent. attended the ante-natal clinic at the Glasgow Royal Maternity Hospital. The remainder obtained some degree of ante-natal supervision from private practitioners or elsewhere. There is a slight increase in the number of patients receiving ante-natal care, although probably in many cases the ante-natal care was inadequate.

Neo-Natal Deaths and Still-Births.—There was a total of 160 neo-natal deaths and 188 still-births.

STOBHILL HOSPITAL.

The accommodation for patients remained unaltered during the year. Alterations which were foreshadowed in the Annual Report of 1936 are still in prospect, sketch plans having been prepared for the new Children's Block and a new Nurses' Home. The original idea of remodelling and extending the existing Children's Block to accommodate nursing staff has been departed from, and an entirely new home will be built on a vacant site within the hospital grounds.

The increasing number of chronic and elderly patients which it has been found necessary to retain in Stobhill Hospital because of difficulty in obtaining accommodation elsewhere has resulted in the establishment of a small waiting list for admission. Nevertheless, the admissions to Stobhill were increased by 602 compared with last year, and the average days' residence reduced by over 3 days. The mental observation wards are, at times, subjected to considerable pressure because of shortage of asylum accommodation to which certifiable cases could be transferred. In nearly every department of the hospital extra beds have been in use throughout the year.

During the year considerable alterations and additions were made to the equipment of the X-Ray Department. Two new clinical laboratories for the use of resident doctors were provided.

EASTERN AND WESTERN DISTRICT HOSPITALS.

Ground adjacent to the Eastern District Hospital has been acquired by the Corporation, and it is proposed to erect thereon a large and fully equipped out-patient centre. This will be used for the purpose of treatment and supervision of hospital out-patients, and for affording specialist examination of patients referred from other clinics. There will also be built accommodation for nurses in order to enable the 48-hours' week to be brought into operation.

SOUTHERN GENERAL HOSPITAL.

The policy of the Public Health Committee to transform the Southern General Hospital into an up-to-date institution is now showing results. The accommodation within the hospital as shown in Table A does not now include any beds set aside specifically for ordinary inmates or for chronic and bed-ridden patients. Alterations have been commenced in connection with the proposed Electro-Medical Department, and already a considerable amount of apparatus has been installed. It is expected that the X-ray and other equipment will be completed in the ensuing year. Other alterations, extensions, etc., which have been carried out during the year are as follows :—

- (1) Increased accommodation was provided in the general office and a central switchboard was installed.
- (2) Improved accommodation was provided for ante-natal and maternity patients.
- (3) New sterilising equipment was installed in both operating theatres, and the theatres themselves were reconstructed and brought up-to-date.
- (4) A new food freighter was supplied and hot cupboards were installed in the ward kitchens to improve the food service to patients.
- (5) The laundry plant was augmented by the installation of a new calender and two pressers.
- (6) Two additional tennis courts were provided for the nursing staff.
- (7) Medical staff quarters were enlarged and reconstructed.
- (8) A mess room with pantry and cloakroom accommodation was provided for the nursing staff, which is used to supply the night staff with hot meals.
- (9) A central dressing steriliser was installed to serve the hospital wards.
- (10) One medical ward, Ward 3, was overhauled and modernised.
- (11) A new out-patient clinic was approaching completion at the end of the year and will soon be functioning.

OUTDOOR MEDICAL SERVICES CLINIC.

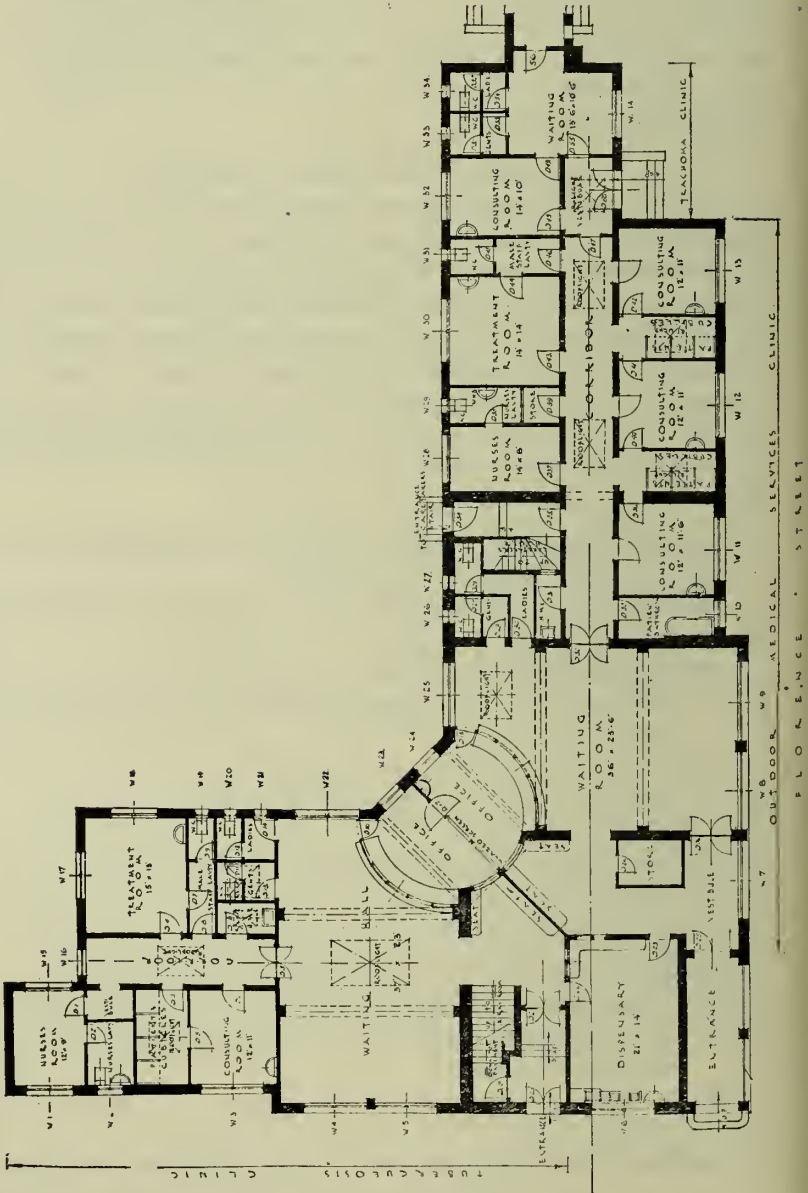


TABLE I.—GENERAL HOSPITALS.—NUMBER OF CASES DISMISSED FROM EACH HOSPITAL FOR THE YEAR ENDED 31ST DECEMBER, 1937, ARRANGED ACCORDING TO DISEASE AND SEX.

DISEASES (Short Classification).	STOBHILL.			EASTERN DISTRICT.			WESTERN DISTRICT.			SOUTHERN GENERAL.			TOTALS.			Per-centage of Total Cases dealt with, according to the modication with, and without, the aid of the Hospital.		
	M.		F.	M.		F.	M.		F.	M.		F.	M.		F.			
	M.	F.		M.	F.		M.	F.		M.	F.		M.	F.				
Acute Infectious Disease	45	34	79	2	3	5	2	5	7	13	7	20	62	49	111	36	26.5	27
Influenza	72	43	115	34	14	48	9	6	15	39	14	53	154	77	231	76	21.2	46
Tuberculosis, Respiratory	150	59	209	21	17	38	15	1	16	68	19	87	254	96	350	115	74.2	24.2
„ Non-Respiratory	29	18	47	5	6	11	8	1	9	7	9	16	49	34	83	27	66.7	52
Malignant Disease	233	158	391	27	17	45	34	16	50	115	93	208	410	284	694	227	51.4	33.2
Rheumatism, Acute	62	96	158	31	37	68	15	12	27	51	41	92	159	186	345	113	59.4	19.0
„ Muscular, etc.	103	57	160	20	15	35	15	15	30	46	41	87	184	128	312	102	45.5	13.2
„ Chronic Arthritis	40	48	88	6	7	13	11	7	18	26	23	49	83	85	168	55	93.8	14.7
Veneral	16	16	32	2	1	3	4	—	4	9	7	16	31	24	55	18	37.1	19
Pregnancy and Diseases connected with Child Bearing	—	2,077	2,077	—	754	754	—	1,199	1,199	—	1,431	1,431	—	5,461	5,461	17.90	15.7	7.99
Congenital Debility and other Diseases of early infancy and malformations	83	59	142	45	19	64	22	8	30	51	21	72	201	107	308	101	42.3	12.1
Mental	256	296	552	68	77	145	1	3	4	183	130	313	508	506	1,014	332	105.7	9.99
Senile Decay	257	246	503	41	44	85	32	19	51	127	120	247	457	429	886	291	70.9	5.84
Violence	179	137	316	41	33	74	135	70	205	83	57	140	438	297	735	241	32.9	2.25
Diseases not included in above—																		
Nervous System	508	446	954	111	73	184	89	31	120	332	235	567	1,040	785	1,825	598	65.9	11.19
Respiratory System	749	517	1,266	336	182	518	315	167	482	472	301	773	1,872	1,167	3,039	996	34.1	9.65
Circulatory System	404	354	758	130	83	213	108	69	177	363	279	642	1,005	785	1,790	586	47.4	7.89
Digestive System	1,043	823	1,866	245	139	384	820	765	1,585	341	228	569	2,449	1,955	4,404	1444	15.3	6.27
Genito-Urinary System	188	398	586	75	130	205	41	106	147	118	321	422	837	1,259	413	31.5	3.70	3.70
Skin	350	295	645	1	4	5	4	3	7	138	109	247	493	411	904	297	55.3	4.65
Other Diseases	463	475	938	100	145	245	101	89	190	214	240	454	878	949	1,827	599	40.3	6.85
No Appreciable Disease	43	54	97	1	2	3	6	4	10	14	24	60	74	134	44	14.2	14.2	18
Born in Hospital	648	598	1,246	281	271	552	473	496	969	385	401	786	1,787	1,766	3,553	11.65	12.1	3.99
Healthy Children	524	450	974	5	4	9	2	4	6	15	17	32	546	475	1,021	3.34	68.2	6.48

6,445 7,754 14,199 1,629 2,077 3,706 2,262 3,096 5,358 3,206 4,040 7,246 13,542 16,967 30,509 100· 35·21 100·

TABLE II.—NUMBER OF DISMISSALS AND DEATHS IN THE CORPORATION

Diseases.	Not Stated.		-1		-3		-5		-16	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
<i>Acute Infections—</i>										
Influenza, including influenzal pneumonia	—	—	—	—	1	1	1	—	8	5
Acute infectious diseases, including all notifiable diseases, together with measles, rubella, whooping-cough, mumps, but excluding pneumonia and puerperal fever, post-encephalitis lethargica and post-polio-myelitis, classified separately	—	—	6	5	19	15	9	6	11	10
Rheumatic fever, acute and sub-acute rheumatism (including chorea)	—	—	—	—	—	—	2	3	64	68
Other acute infections not requiring segregation	—	—	1	1	3	3	—	3	7	4
<i>Venereal Diseases—</i>										
Syphilis, gonorrhoea and soft sore, syphilis, including all tertiary manifestations of the disease, except aneurysm and cardiac disease. Syphilis of the central nervous system is also classified separately. Stricture classified under other diseases of the genito-urinary system	—	—	—	1	—	—	—	—	2	—
<i>Tuberculosis—</i>										
Pulmonary	—	—	1	—	2	1	—	—	9	9
Non-pulmonary	—	—	4	1	2	6	3	—	10	8
<i>Chronic Rheumatism—</i>										
Joints	—	—	—	—	—	—	—	—	3	4
Fibrous tissues, including muscular rheumatism, sciatica, and lumbago	—	—	—	—	—	—	—	—	1	4
<i>Metazoan Parasites</i>										
Scabies, pediculosis, etc.	—	—	3	8	21	20	9	8	35	32
<i>Diseases of the Blood—</i>										
Constitutional, diathetic and general diseases, diseases of the ductless glands, deficiency diseases (not including rickets)	—	—	1	—	1	3	2	3	5	11
Malnutrition (deprivation)	—	—	—	—	—	—	—	—	—	—
<i>Malignant Disease of (cancer and sarcoma)—</i>										
Central nervous system	—	—	—	—	—	—	—	—	—	1
Respiratory system	—	—	—	—	—	—	—	—	—	—
Digestive system	—	—	—	—	—	—	—	—	—	—
Genito-urinary system	—	—	—	—	—	—	—	—	—	—
Female generative organs	—	—	—	—	—	—	—	—	—	—
Breast	—	—	—	—	—	—	—	—	—	—
Other organs	—	—	—	—	—	—	—	1	1	1
<i>Simple Tumours, Cysts, etc.</i>	—	—	—	—	1	—	1	—	1	3

GENERAL HOSPITALS DURING THE YEAR ENDED 31ST DECEMBER, 1937.

GROUPS.

-25		-45		-65		-75		+75		Total.		Grand Total.	Deaths.		Total.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		M.	F.	
21	12	64	34	43	14	14	9	2	2	154	77	231	26	9	35
5	3	4	4	7	4	1	1	—	1	62	49	111	5	2	7
25	36	53	60	14	19	1	—	—	—	159	186	345	10	5	15
1	4	3	4	1	—	—	1	—	—	16	20	36	2	2	4
4	4	11	9	12	8	2	2	—	—	31	24	55	—	—	—
38	34	88	30	109	18	4	3	3	1	254	96	350	89	23	112
8	6	12	6	10	6	—	1	—	—	49	34	83	17	12	29
—	4	17	19	49	32	14	18	—	8	83	85	168	4	4	8
8	7	64	50	80	46	27	16	4	5	184	128	312	—	—	—
—	—	1	2	—	—	—	—	—	—	5	8	13	—	—	—
20	26	26	14	8	3	4	—	—	1	126	112	238	—	—	—
10	17	33	73	42	116	22	43	5	10	121	276	397	27	45	72
—	—	—	—	1	—	—	—	—	—	1	—	1	—	—	—
2	—	8	6	7	5	—	1	—	—	17	13	30	10	7	17
—	—	8	3	45	10	17	2	2	1	72	16	88	50	11	61
3	—	15	18	104	57	84	44	34	15	240	134	374	162	87	249
—	—	2	1	20	1	14	2	3	—	39	4	43	26	2	28
—	1	—	17	—	29	—	7	—	4	—	58	58	—	24	24
—	—	—	4	—	13	—	4	—	8	—	29	29	—	18	18
1	—	4	7	18	11	13	6	5	4	42	30	72	17	13	30
1	2	3	2	2	2	1	—	—	—	10	9	19	—	—	—

TABLE II.—NUMBER OF DISMISSALS AND DEATHS IN THE CORPORATION
AGE

Diseases.	Not Stated.		-1		-3		-5		-16	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
<i>Diseases of the Nervous System—</i>										
Syphilis, including G.P.I. and tabes	—	—	—	—	—	—	—	—	—	—
Cerebral haemorrhage, embolism and thrombosis	—	—	—	—	—	—	—	—	—	—
Epilepsy	—	—	—	—	1	—	—	3	18	14
So-called functional diseases of central nervous systems, <i>e.g.</i> , neurasthenia	—	—	—	—	—	—	—	—	2	2
Post-polio-myelitis anterior	—	—	—	—	—	—	—	—	—	—
Post-encephalitis lethargica	—	—	—	—	—	—	—	—	1	—
Insanity (all mental cases)	2	—	—	—	—	—	—	—	5	6
Idiocy, imbecility, feeble-mindedness	—	—	—	1	5	2	2	3	24	9
Meningitis (not C.S.F. or tubercular meningitis)	—	—	3	2	3	2	1	—	1	—
Other diseases of central nervous system	—	—	—	—	1	—	1	—	2	2
Diseases of the peripheral nervous system	—	—	—	—	—	—	—	—	1	2
Diseases of the eye	1	—	2	3	3	7	3	2	6	10
Diseases of the throat and nose, excluding infection of or hypertrophy of tonsils and adenoids	—	—	1	—	1	1	4	—	26	11
Diseases of the ear	—	—	12	4	7	8	3	2	35	26
<i>Diseases of the Circulatory System—</i>										
Valvular heart disease	—	—	—	1	—	—	—	—	29	33
Other heart disease	—	1	—	—	—	—	—	—	2	2
Arterio-sclerosis	—	—	—	—	—	—	—	—	—	—
Varicose veins and varicose ulceration of legs	—	—	—	—	—	—	—	—	—	—
Other diseases	—	—	—	—	—	—	—	—	1	1
<i>Diseases of Respiratory System—</i>										
Pneumonia—acute	—	—	121	82	85	62	14	22	24	24
Bronchitis—acute	1	—	84	64	81	50	28	30	46	26
Chronic bronchitis, including asthma and other complications	—	—	1	—	—	—	—	2	10	5
Other diseases	—	—	3	—	3	6	4	—	36	25
<i>Diseases of the Digestive System—</i>										
Hypertrophy of tonsils and adenoids	—	—	1	—	13	6	38	30	712	742
Acute tonsillitis or pharyngitis	—	—	1	1	12	4	12	6	13	31
Gastritis	1	—	2	1	—	1	1	—	3	4
Gastric and duodenal ulcer	—	—	—	—	—	—	—	—	—	1
Appendicitis	—	—	—	—	—	—	4	—	29	24
Diarrhoea and enteritis	2	—	194	135	43	37	14	13	11	15
Caries and other diseases of teeth and gums (dental cases)	—	—	—	—	1	—	10	8	6	11
Hernia of abdominal viscera	—	—	18	1	8	—	3	2	3	1
Haemorrhoids	—	—	—	—	—	—	—	—	—	—
Other diseases	1	—	10	4	10	6	9	4	28	17
<i>Diseases of Genito-Urinary System—</i>										
Acute nephritis	—	—	—	—	—	3	1	4	22	21
Chronic nephritis	—	—	—	—	—	—	—	—	—	4
Prostatitis	—	—	—	—	—	—	—	—	—	—
Stricture	—	—	—	—	—	—	—	—	1	—
Diseases of the female generative organs	—	—	—	—	—	3	—	—	—	5
Other diseases of genito-urinary system	3	—	5	2	5	6	1	1	9	19

GENERAL HOSPITALS DURING THE YEAR ENDED 31ST DECEMBER, 1937—*Continued.*
GROUPS.

-25		-45		-65		-75		+75		Total.		Grand Total.	Deaths.		Total.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		M.	F.	
5	4	16	12	40	20	4	1	—	—	65	37	102	20	9	29
—	1	7	20	147	116	120	99	58	37	332	273	605	171	167	338
4	23	41	38	24	14	9	1	2	—	129	93	222	9	2	11
7	18	33	37	31	29	2	4	—	—	75	90	165	—	—	—
—	—	1	—	—	—	—	—	—	—	1	—	1	—	—	—
8	2	23	8	3	5	1	—	1	—	37	15	52	6	8	14
6	45	184	181	159	175	16	28	—	2	432	437	869	16	34	50
9	22	18	24	8	8	—	—	—	—	76	69	145	1	3	4
—	—	6	2	1	—	1	—	—	—	16	6	22	9	6	15
5	9	41	36	63	28	14	13	4	—	131	88	219	14	16	30
1	—	8	11	28	17	3	6	1	2	42	38	80	—	—	—
3	2	5	6	13	11	4	2	—	—	40	43	83	—	—	—
7	11	33	7	9	6	1	1	1	2	83	39	122	—	—	—
2	10	12	7	7	4	—	1	1	1	89	63	152	3	—	3
8	31	53	82	128	99	58	32	11	12	297	290	587	102	90	192
5	3	19	32	148	89	131	73	63	55	368	255	623	198	145	343
—	—	3	6	86	66	93	51	41	37	223	160	383	97	61	158
4	—	10	20	36	36	21	9	5	3	76	68	144	—	—	—
2	—	1	4	27	4	9	3	1	—	41	12	53	24	3	27
3	7	52	26	76	38	25	9	8	8	421	278	699	227	134	361
5	19	49	47	55	40	10	7	1	2	370	285	655	26	13	39
4	19	140	92	399	171	211	115	68	51	843	455	1,298	172	89	261
0	23	72	55	69	31	16	9	5	—	238	149	387	18	7	25
3	8	7	10	—	1	—	—	—	—	779	797	1,576	—	1	1
4	23	37	40	9	3	4	1	—	1	102	110	212	2	2	4
0	3	70	19	52	17	14	20	3	1	156	66	222	—	—	—
9	2	107	7	66	16	5	3	1	—	188	29	217	17	2	19
3	11	22	19	5	4	4	1	—	—	77	59	136	7	1	8
4	2	7	13	10	7	5	3	1	1	291	226	517	105	61	166
3	85	221	267	42	36	3	4	—	—	346	411	757	—	—	—
7	—	40	4	46	11	12	6	2	—	139	25	164	5	1	6
2	1	36	5	37	6	2	—	—	1	77	13	90	—	—	—
5	28	80	56	80	54	38	34	8	8	289	211	500	34	27	61
9	6	10	7	6	3	—	1	—	—	48	45	93	3	5	8
3	—	18	17	24	27	8	13	—	—	53	61	114	28	25	53
—	—	—	—	22	—	43	—	19	—	84	—	84	19	—	19
—	—	7	—	13	—	4	—	4	—	29	—	29	3	—	3
—	97	—	359	—	54	—	15	—	2	—	535	535	—	8	8
—	30	73	77	62	37	22	18	14	6	208	196	404	17	9	26

TABLE II.—NUMBER OF DISMISSALS AND DEATHS IN THE CORPORATE

AGI

Diseases.	Not Stated.		-1		-3		-5		-16	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
<i>Pregnancy—</i>										
Diseases peculiar to pregnancy and other diseases complicated by pregnancy—ante-natal only	—	—	—	—	—	—	—	—	—	—
<i>Parturition and Puerperium—</i>										
Diseases peculiar to pregnancy and other diseases complicated by pregnancy ; Parturition in Hospital	—	—	—	—	—	—	—	—	—	—
Lying-in normal	—	—	—	—	—	—	—	—	—	—
Lying-in with puerperal complications	—	1	—	—	—	—	—	—	—	—
Lying-in with sepsis and pyrexia	—	—	—	—	—	—	—	—	—	—
Lying-in with other diseases	—	—	—	—	—	—	—	—	—	—
Abortion and miscarriage	—	—	—	—	—	—	—	—	—	—
Delivered outwith hospital	—	—	—	—	—	—	—	—	—	—
Born in hospital	—	—	1,787	1,766	—	—	—	—	—	—
Diseases of the skin	1	—	42	26	48	38	26	32	53	8
Inflammation of cellular tissue, including acute inflammation of lymphatic glands	1	—	27	11	34	33	16	18	57	5
Acquired deformities of bones, joints, etc.	—	—	—	—	1	—	1	—	4	—
Inflammation of bones, joints, and organs of locomotion, excluding tuberculosis and rheumatism	—	—	—	1	3	2	3	1	21	—
Diseases, injuries, and malformation of the newly-born	—	—	41	27	—	—	—	—	—	—
Congenital malformations and deformities (under 5 years)	—	—	40	7	13	3	12	—	—	—
Congenital malformations and deformities (over 5 years)	—	—	—	—	—	—	—	—	23	—
Diseases peculiar to infancy and childhood	—	—	66	43	14	12	6	5	9	—
Rickets and malnutrition	—	—	5	7	7	9	4	—	2	—
Accidents and injuries—fractures	2	1	—	1	5	3	5	4	27	—
Accidents and injuries—others	1	—	4	4	28	21	27	9	62	—
Poisoning	—	—	—	—	1	—	—	—	1	—
<i>Alcoholism—</i>										
Including acute alcoholism, alcoholic gastritis, delirium tremens, alcoholic cirrhosis, etc.	—	—	—	—	—	—	—	—	—	—
<i>Senility—</i>										
Old age, including senile dementia and senile gangrene	—	—	—	—	—	—	—	—	—	—
Debility following operations, childbirth and acute infections	—	—	—	—	—	—	—	—	2	—
Healthy Children	—	—	128	132	66	67	62	53	290	2
Diseases ill-defined or not specified	2	—	—	—	1	—	—	—	2	—
No appreciable disease	—	—	13	11	11	12	2	7	9	—
	18	3	2,627	2,353	566	454	344	287	1,827	1,6

GENERAL HOSPITALS DURING THE YEAR ENDED 31ST DECEMBER, 1937—*Continued.*
GROUPS.

-25		-45		-65		-75		+75		Total		Grand Total.	Deaths.		Total.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		M.	F.	
—	287	—	459	—	2	—	—	—	—	—	750	750	—	4	4
—	111	—	252	—	—	—	—	—	—	—	364	364	—	3	3
—	1,241	—	1,375	—	8	—	—	—	—	—	2,627	2,627	—	—	—
—	220	—	314	—	3	—	—	—	—	—	538	538	—	11	11
—	43	—	58	—	1	—	—	—	—	—	102	102	—	11	11
—	31	—	48	—	—	—	—	—	—	—	79	79	—	7	7
—	201	—	704	—	7	—	—	—	—	—	913	913	—	11	11
—	31	—	57	—	—	—	—	—	—	—	88	88	—	1	1
—	—	—	—	—	—	—	—	—	—	1,787	1,766	3,553	81	79	160
52	31	73	35	51	33	16	8	5	12	367	299	666	3	2	5
32	113	88	155	70	39	27	20	8	4	360	446	806	21	10	31
3	7	17	7	13	9	4	3	1	1	44	29	73	1	2	3
3	2	15	4	11	4	3	—	—	—	59	22	81	5	3	8
—	—	—	—	—	—	—	—	—	—	41	27	68	33	23	56
—	—	—	—	—	—	—	—	—	—	65	10	75	10	5	15
—	1	1	2	1	—	—	—	—	—	25	4	29	—	—	—
—	—	—	—	—	—	—	—	—	—	95	70	165	37	24	61
—	—	—	—	—	—	—	—	—	—	18	16	34	1	—	1
3	2	34	14	48	26	42	33	15	28	181	117	298	10	7	17
16	9	50	20	40	41	15	27	7	10	250	175	425	6	3	9
1	2	2	1	2	1	—	1	—	—	7	5	12	—	—	—
—	—	57	15	98	43	18	6	1	—	174	64	238	5	9	14
—	—	—	—	28	22	184	152	245	255	457	429	886	237	192	429
4	7	2	11	3	3	3	—	1	1	15	25	40	—	—	—
—	—	—	—	—	—	—	—	—	—	546	475	1,021	—	—	—
3	7	12	22	15	8	—	—	—	—	35	38	73	—	—	—
13	12	7	9	4	9	—	1	1	1	60	74	134	—	—	—
29	3,059	2,336	5,578	2,987	1,936	1,443	994	665	604	13,542	16,967	30,509	2,248	1,600	3,848

TABLE III.—RETURN OF OPERATIONS PERFORMED IN GENERAL HOSPITALS FROM 1ST JANUARY TO 31ST DECEMBER, 1937—Continued.

	STOBHILL.	EASTERN DISTRICT.			WESTERN DISTRICT.			SOUTHERN GENERAL.			TOTALS.		
		No. of Operations.			No. of Operations.			No. of Operations.			No. of Operations.		
		A	B	C	A	B	C	A	B	C	A	B	C
<i>Brought forward</i>		597	168	111	193	26	1	155	11	5	383	37	97
16. Operations on Bones, Joints, and Organs of Locomotion	...	145	4	83	9	—	—	33	1	—	136	7	46
17. Amputations of Arm, Hand, Leg, or Foot	...	14	—	—	1	—	—	—	—	—	11	—	—
18. Amputations of Fingers or Toes	...	5	—	—	1	—	—	4	—	—	2	—	—
19. Incisions for Acute Abscesses and Cellulitis	...	394	35	12	52	—	—	59	6	2	214	24	8
20. Operations on Skin, Subcutaneous Tissues, and Superficial Lymphatic Glands	...	56	17	9	2	—	—	3	1	—	31	28	33
21. Operations on Throat and Nose (excluding removal of Tonsils and Adenoids)	...	51	121	13	2	—	—	—	—	—	15	14	—
22. Operations for Removal of Tonsils and Adenoids	...	239	19	—	—	—	—	1,348	—	—	84	1	—
23. Operations on Eye	...	21	65	—	—	—	—	—	—	—	—	2	—
24. Operations on Ear	...	113	19	39	—	—	—	2	—	—	29	5	—
25. Operations on Teeth and Gums	...	1,086	1	—	394	—	—	137	—	—	101	1,131	—
26. Obstetric Operations	...	777	1	7	190	—	—	159	—	—	458	—	—
27. Diathermy	...	9	9	—	3	—	—	—	—	—	6	—	—
		3,507	459	274	847	26	1	1,900	19	7	1,470	1,249	184
												7,724	1,753
													466

A—With General or Spinal Anaesthetic.
B—With Local Anaesthetic.
C—Without Anaesthetic.

The following statement summarises the change in the Roll during 1937 :—

Cases on the Roll at 31st December, 1936	...	...	202
Cases applying for the first time during 1937	...	71	
Cases who discontinued treatment prior to 31st December, 1936, but re-applied during 1937		17	
		—	88
			<hr/> 290
Cases who died during 1937	...	28	
Cases who discontinued supply during 1937	...	38	
		—	66
			<hr/> 224
Leaving cases on the Roll at 31st December, 1937	...		

The 38 cases who discontinued treatment were visited, and the following reasons were given for their discontinuance :—

Gone away, no address	...	...	...	...	...	4
Discontinued on medical advice	...	...	...	...	...	10
Discontinued of own accord	...	...	...	...	...	17
Obtaining supplies elsewhere (per P.A.D. or N.H.I.)	...	...	...	...	...	3
Removed to hospital	...	...	...	...	...	4
						<hr/> 38

The daily dosage of these 224 cases is as follows :—

					Number of Cases receiving		
Daily Amount.					Ordinary Strength.	Double Strength.	Protamine Insulin.
Under 5 units	...	...	...	...	—	—	—
5 to 14 units	...	...	...	...	24	1	9
15 to 24 units	...	...	...	...	35	1	8
25 to 34 units	...	...	...	...	39	1	7
35 to 44 units	...	...	...	...	26	4	2
45 to 54 units	...	...	...	...	10	—	2
55 to 64 units	...	...	...	...	13	3	4
65 to 74 units	...	...	...	...	1	3	1
75 to 84 units	...	...	...	...	1	5	—
85+ ...	...	...	...	...	1	3	1
Not stated	...	...	...	...	10	5	4
					160	26	38
					224		

The present age of the 224 cases on the Roll at the end of the year is as follows :—

Age.	No. of Cases.
1 to 10 years	4
11 to 20 years	19
21 to 30 years	4
31 to 40 years	13
41 to 50 years	32
51 to 60 years	67
61 to 70 years	69
71 to 80 years	12
80+ years	1
Not stated	3
	<hr/>
	224
	<hr/>

The preponderance of married women on the Roll (83 per cent. of the cases) is shown in the following table :—

Married women and widows—housewives	186
Unmarried women—at home	9
Uninsured males	12
School children	16
Child of 4 years of age	1
	<hr/>
	224
	<hr/>

During the year 22,519 phials of Insulin were issued. Of these, 17,778 were ordinary strength (100 units per 5 c.c.), 3,888 were double strength (200 units per 5 c.c.), and 24 were extra-double strength (400 units per 5 c.c.). Also included in this total were 270 phials of Protamine (Retard) and 559 Protamine (Zinc) Insulin. The cost was £715 7s. 7d., as compared with £710 6s. 4d. per 24,318 phials issued during 1936. This increase in cost, despite a reduction in the total amount issued, is due to the introduction of the more expensive Protamine Insulins.

PART IV.

MENTAL HOSPITALS.

By Dr. Ronald Stewart.

Admissions and Deaths.—During the year 559 certified lunatics were admitted to the mental hospitals, a considerable increase on the figure of 268 for the previous year. This is accounted for by the fact that the additional hospital accommodation provided in the new extension at Hawkhead became available for patients. By the end of the year practically the whole of this new accommodation had been utilised. The increase in the number of admissions to hospital does not necessarily indicate an increase in the incidence of certifiable insanity but may be accounted for in part at least by the utilisation of the new accommodation for the purpose of relieving the overcrowding in the observation wards of the general hospitals. Many certifiable cases which had been retained in these wards for a considerable period owing to lack of accommodation in the mental hospitals were certified and removed.

On 7th August, Stoneyetts Hospital was opened for the reception of mental patients. This hospital, which had previously been a certified institution for mental defectives and from which the defectives had been transferred to Lennox Castle at the end of 1936, was originally intended for cases of senile insanity, but owing to unforeseen circumstances the hospital had to be used for insanity of all types. Owing to the severe storms which occurred early in the spring of the year, the Reception House and Sanatorium at Woodilee became unsafe for habitation and the only alternative accommodation available was at Stoneyetts; the patients were accordingly transferred there after certain renovations and minor alterations had been carried out. The buildings at Woodilee were thereafter demolished and the site prepared for new hospital and sanatorium wards, plans for which have been approved. The new buildings will not be ready for occupation before the summer of 1939.

At Stoneyetts, by the end of 1937, three villas had been utilised for patients, two for males and one for females. A fourth villa was almost ready and will be utilised for female patients early in 1938. Of the remaining two villas, one was converted for temporary use as a nurses' home, while the other will be replaced by a permanent nurses' home to be built in accordance with modern require-

ments. As a result of these circumstances the accommodation at Stoneyetts did not relieve to any material extent the overcrowding and shortage of beds in the other mental hospitals as had been anticipated.

During the year there were 3,550 patients under care in the four mental hospitals; this figure compares with 3,291 for the previous year, an increase of 259. There were 3,096 cases on the register on 31st December, 1937, as compared with 2,991 on 31st December, 1936. The decrease in the number of patients discharged recovered, 64, as compared with 73 for the previous year, was largely owing to the fact that many patients of a more chronic type were removed to the new wards to relieve the congestion in the observation wards of the general hospitals. The death-rate continues to be very low. There were 164 deaths—the second lowest number recorded and only six more than that for the previous year.

As in previous years it is worthy of note that of those discharged recovered the great majority were discharged within one or two years of admission. Thus, 62.5 per cent. were discharged within one year of admission; 20.3 per cent. after one year and within two years; 9.3 per cent. after two years and within five years; and 7.9 per cent. after five years' residence. It is interesting to record that during the past seven years 23 males and 9 females have been discharged recovered from the Glasgow mental hospitals after a period of continuous treatment extending beyond five years in each case. Upwards of 55 per cent. of the deaths occurred in patients who had been in residence for more than five years.

Types of Mental Disorder.—As has been noted in previous reports, more than half the admissions belong to the three well recognised groups, viz., manic depressive psychoses, schizophrenia, and senile dementia. Of these, as is to be expected, a fair proportion of recoveries were obtained in the first group while few recoveries occurred or could be expected in the other two groups. Senile decay, diseases of the respiratory system, and organic brain disease account for the largest proportion of the deaths.

The causation of mental disorder in the admissions to hospital is very difficult to determine with any degree of accuracy. Constitutional and environmental factors play a large part and the break-down cannot be attributed to one or other with certainty. Mental stress, constitutional inferiority and endocrine disturbances consequent on the climacteric were all well recognised factors in the causation of the illnesses in many cases. A history of alcoholism

was obtained in many cases but whether this was causative or symptomatic of the illness was very difficult to determine with any certainty.

Patients in Other Institutions.—A further decline has occurred in the number of beds available for Glasgow cases in institutions belonging to other authorities. During the year 39 cases chargeable to Glasgow were admitted to these institutions and 94 were discharged or transferred. Towards the end of November an urgent request was received for the removal of the Glasgow cases housed in Kirklands Asylum, and by the end of the year 22 of these patients had been transferred to Glasgow mental hospitals. The total number remaining in outside institutions at the end of the year was 657 as compared with 712 at the end of 1936. A further decline in this number is likely to occur in 1938.

Extensions of Mental Hospitals.—At Gartloch a start has been made with the building of the new nurses' home and preparations are being made for commencing the construction of the new hospital wards to accommodate 300 patients. At Woodilee the building of the additional wings to the nurses' home is in an advanced stage, and the overhaul of the heating system in the nurses' home is proceeding satisfactorily. Mention has already been made of the demolition of the reception house and sanatorium blocks and the preparation of the ground for the building of new hospital blocks to replace them. The new buildings when completed will accommodate 124 patients.

At Stoneyetts a start has not yet been made with the new buildings but plans have been approved for extensions and alterations to the hospital which when completed will accommodate 400 patients. The main addition to this hospital will consist of a two-storey block to accommodate 150 patients mostly of the senile type, and this along with the five villas will form a very compact modern mental hospital with greater potentialities for efficient classification than is to be found in most mental hospitals.

Caldwell House Certified Institution.—In May, 1937, the mental defectives in Caldwell House were transferred to Lennox Castle and the institution which had been administered by the Public Assistance Committee was handed over to the Committee on Health to be used as a certified institution for ineducable defectives under the age of sixteen. Full use could not be made of the institution owing to an arrangement whereby a part of the institution was temporarily handed over to the Joint Committee for the Blind for use as a

home for a number of the aged blind. This accommodation was still occupied by the blind at the close of the year but other accommodation for them is being sought elsewhere.

The housing of the nursing staff presented some difficulties but these were overcome by utilising a dormitory on the top floor of the main building as staff accommodation. By the end of the year 80 juvenile defectives were in residence. When the Boys' Home is vacated by the blind further accommodation for about 30 patients will become available but it is doubtful whether this will be sufficient for the needs of the city.

Lennox Castle Institution.—On 31st December, 1937, there were 988 patients in Lennox Castle Certified Institution. During the year 457 patients were admitted, 16 were discharged, and 19 died. Of the admissions, 139 were from the municipal general hospitals, 134 were transferred from Caldwell House, 52 from the Royal Scottish National Institution, Larbert, and 38 from their own homes.

Admission of Lunatics from Prison.—There has been a very marked increase during the year in the demand for accommodation for dangerous lunatics notified by the Procurator-Fiscal. There were 107 cases of this type notified during the year. This whole matter will doubtless come under review when the Committee appointed by the Secretary of State for Scotland to revise the existing lunacy laws applicable to Scotland proceeds to take evidence.

Licensed Wards in Southern General Hospital.—These wards continue to be occupied to their full capacity by the more harmless type of chronic patient. There are at present 389 beds available for this type of patient in the licensed wards.

Research.—Further research work in connection with the causation of mental illness continues to be carried out in all the mental institutions in collaboration with the Director of the West of Scotland Neuro-Psychiatric Research Institute.

Working Hours of Staff.—The 48-hour week was introduced in October, 1936. Some difficulty has been experienced in obtaining sufficient female nurses but this was largely due to the large number required for so many hospitals within a limited period; it is anticipated that when the demand decreases the supply will adjust itself automatically.

Dental Services.—From 1st April, 1937, the services of a whole-time dentist for the mental institutions were made available.

MENTAL OBSERVATION WARDS.

There was again an increase in the number of patients admitted to the observation wards of the general hospitals during the year, the numbers admitted being 1,698 as against 1,554 for the preceding year. The total number receiving treatment shows an even greater increase, 2,150 as against 1,911. The proportion of incurable lunatics and seniles still remains high owing to the lack of more suitable accommodation elsewhere, but in spite of this handicap the wards continue to justify their position as a highly desirable and important part of the services for dealing with mental ill-health in the city.

Of the 2,150 cases treated during the year, 1,139 (53 per cent.) were sufficiently recovered to be discharged to their homes or, where they had no homes, to a Public Assistance institution; 287 patients (13.35 per cent.) died, but a great proportion of these were old people and those admitted in the delirium of death from causes other than mental disease. There were 302 patients (14 per cent.) certified and removed to mental hospitals. Full use continues to be made of the facilities available in the hospitals for the investigation and treatment of each individual case, and the assistance of the X-Ray Department, the Biochemical Department, the Massage and Electrotherapy Department and of the other special departments is frequently utilised. Modern methods of treatment by Somnifaine, Cardiazol and the like are being used in some cases with varying degrees of success.

Psychiatric Clinic.—This clinic continues to be held on two days each week at 20 Cochrane Street, and is proving itself of considerable service to many patients whose illnesses do not necessitate indoor treatment in hospital. It has not yet been possible to extend the scope of the clinic owing to the lack of accommodation but this matter is still under consideration and an extension of the scope and services of the clinic is anticipated in the near future.

Exact figures are not available for the year but upwards of 120 new cases were examined and treated in addition to many patients discharged from the Observation Wards at Stobhill who continued treatment as out-patients. The clinic has proved of considerable value to District Medical Officers, Probation Officers and others who were able to obtain advice and help in difficult cases exhibiting mental symptoms. As many of the cases presented symptoms which were undoubtedly due to failure of adaptation to domestic environmental difficulties, the services of a social worker would greatly enhance the value of the clinic.

Southern General Hospital.—Dr. A. D. Briggs, Medical Superintendent, Southern General Hospital, reports as follows:—The admissions to and discharges from the Observation Wards show an increase over 1936 and accommodation was again taxed to the full, additional beds having to be put up in the wards. Many unsuitable cases, such as chronic psychotics, mental defectives and elderly patients exhibiting mental and physical deterioration had to be detained for long periods owing to the lack of accommodation in the mental hospitals. It is to be regretted that some other provision is not made for senile cases and that their ultimate disposal is usually certification. The purpose of the Observation Wards is still not fully attained owing to the presence of these cases.

The medical staff was augmented by the appointment of a Visiting Psychiatrist (Dr. Alexander Dick) and this has resulted in a closer supervision and a higher standard in the treatment of the patients. Arrangements were made to appoint a nurse with a general and mental training to be employed in visiting patients' homes, obtaining histories and following-up discharged patients. It is recognised that home conditions, occupation, environment, etc., are frequently the cause of mental breakdown and from the histories and information supplied by an experienced Home Visitor the Psychiatrist is enabled to approach the problem from the correct angle and the recovery of the patient is hastened. The various forms of special treatment, such as Somnifaine for special forms of excitement, Malariatherapy for general paralysis and allied conditions, protein shock for alcoholism, etc., have been applied and are meeting with satisfactory results. In August Cardiazol for certain types of early schizophrenia was commenced and so far the results in this psychosis, formerly recognised as chronic and progressive, have been encouraging. Insulin has also been tried in certain cases but as the technique here is rather involved and makes heavy demands on the medical and nursing staffs it has not been continued as a routine treatment. Many of the cases of functional nervous disorders reacted well to psycho-therapeutic methods and were discharged fully recovered. This treatment makes heavy demands on the Psychologist's time. In the Male Wards a physical exercise class for convalescent patients was instituted by a qualified instructor and these daily exercises had a markedly beneficial effect on the general condition of the patients. Improved facilities were provided for convalescent patients, the day-halls being refurnished and provided with additional games. Full advantage was taken of the grounds available beside the wards for exercises and fresh air.

Further improvements in the construction of the Male Wards are contemplated, such as the provision of improved ward lighting, provision of a small laboratory, installation of a lift, etc. Arrangements have been made to instal a bath for hydro- and electro-therapy.

An increasing number of patients and relatives attended at the Out-patient Clinic attached to the Male Wards and it is hoped early in the year to transfer this work to the new Out-patient Department situated at the entrance to the hospital.

Stobhill Hospital.—The report on the Observation Wards at Stobhill Hospital by Dr. I. M. Sclaire is as follows:—During the year 1937, 872 patients were admitted to the Observation Wards, an increase of roughly 15 per cent. over the previous year. The classification of the forms of mental disorder treated is as follows:—

States of Mania	...	...	...	...	...	55
States of Depression	...	...	...	...	...	123
Schizophrenic-reactions	...	...	...	...	...	98
Delusional States	...	...	...	...	...	88
Confusional States	...	...	...	...	...	27
Epilepsy	...	...	...	...	...	37
Alcoholism	...	...	...	...	...	97
Senile Dementia	...	...	...	...	...	103
Mental Deficiency	...	...	...	...	...	46
Moral Deficiency	...	...	...	...	...	9
Attempted Suicide	...	...	...	...	...	27
General Paralysis of the Insane	...	...	...	...	...	40
Neurosyphilis	...	...	...	...	...	13
Endocrinal Illness	...	...	...	...	...	10
Insanity of Pregnancy	...	...	...	...	...	3
Puerperal Insanity	...	...	...	...	...	15
Psychoneuroses	...	...	...	...	...	11
Head Injuries	...	...	...	...	...	10
Cardiac Illness	...	...	...	...	...	8
Phthisis	...	...	...	...	...	10
Other Physical Illnesses	...	...	...	...	...	16
Unclassified	...	...	...	...	...	26
						<hr/> 872 <hr/>

Throughout the year the female wards were severely taxed and a considerable strain thrown upon the nursing staffs. Many of the patients were admitted suffering from mild or transient mental disorders, some of which were accompanied by bodily illness. There can be no doubt that for these patients the observation ward is a decided boon. Unfortunately, it is not possible, owing to pressure on accommodation, to keep them apart from other patients suffering from more deeply rooted mental affections, the proper place for which is, of course, a mental hospital. It is hoped that these matters will be righted when further accommodation becomes available in the mental hospitals.

The accommodation in the male ward was not so severely taxed, due chiefly to the fact that during 1936 extra accommodation for male mental observation patients had been provided in the Southern General Hospital. Moreover, there was a distinct falling off in the numbers of what may be regarded as true observation ward patients.

Senile patients continue to account for a high proportion of admissions to the mental observation wards. Most of them come into hospital with a history of having been troublesome at home, but as a rule they settle down very quickly after admission and thereafter are not in need of skilled supervision, although for reasons of accommodation they have to be retained in the mental observation wards.

Two wards are still occupied by patients suffering from chronic sleepy sickness, the aftermath of the 1923 epidemic of this disease. Treatment, which has in some cases been continued for more than ten years, has proved unavailing. These patients occupy valuable hospital accommodation which could be devoted to other purposes if they were removed elsewhere.

From among the nurses undergoing general training in the hospital there are still no applicants for the specialised training in the mental observation wards. It is a pity that this important branch of medical work does not attract more nurses.

Research has been pursued in so far as facilities permit. An article on endocrinal disorder was published in the *British Medical Journal*, and a clinical study of the relationship of endocrinal disturbance to certain mental disorders is being undertaken. Case material is being collected with a view to the study of the problems of psychogenesis. A text-book entitled *Mental Nursing in Observation Wards* was published during the year, based on the experience gained in the nursing treatment in a large psychiatric unit of a general hospital.

Commencing in May, 1937, the services of an additional Resident Medical Officer were secured, a step which has added to the efficiency of the wards. An increasing amount of consultation with the visiting consultants to the hospital generally is being requested, in order to explore the psychological factor in bodily illness. During the year a meeting was held with, and a demonstration given to, the Outdoor Medical Officers of the Public Health Department, with a view to securing their co-operation in the earlier recognition of mental illness. This has led to useful results.

TABLE "A"
MENTAL OBSERVATION WARDS.

			Stobhill.		Eastern District.		Southern General Hospital.		Total.					
			M.	F.	Total.	M.	F.	Total.	M.	F.	Total.			
Remaining at 31st December, 1936	139	127	266	30	26	56	102	28	130	271	181	452
Admitted during 1937	419	453	872	99	107	206	387	233	620	905	793	1,698
Number treated during 1937	558	580	1,138	129	133	262	489	261	750	1,176	974	2,150
Number discharged home or transferred to Poorhouse during 1937	299	292	591	55	53	108	282	158	440	636	503	1,139
Number died during 1937	73	74	147	19	14	33	72	35	107	164	123	287
Number removed to Asylum	71	86	157	26	39	65	41	39	80	138	164	302
Number remaining as at 31st December, 1937	115	128	243	29	27	56	94	29	123	238	184	422

The Mental Hospitals at Woodilee, Gartloch, Hawkhead and Stonyetts have continued to fulfil their functions throughout the year in spite of difficulties connected with overcrowding in the wards for acute cases and in the following tables will be found the details:—

TABLE I.
ADMISSIONS, DISCHARGES AND DEATHS IN THE MENTAL HOSPITALS DURING 1937.

	Gartloch.			Woodilee.			Hawkhead.			Stonyetts.			Totals.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
On Register at 31st December, 1936	475	403	878	656	572	1,228	499	386	885	—	—	—	1,630	1,361	2,991
Number of cases admitted during the year	49	30	79	48	40	88	139	115	254	76	62	138	312	247	559
Total cases under care during the year	524	433	957	704	612	1,316	638	501	1,139	76	62	138	1,942	1,608	3,550
Cases discharged and died during the year—															
Recovered	8	7	15	3	1	4	26	15	41	2	2	4	44	36	80
Not recovered	9	4	13	5	11	16	11	2	13	—	1	1	20	7	27
Died	23	20	43	33	34	67	20	33	53	—	1	1	76	88	164
Transferred to other Institutions in Scotland, and boarded-out in private dwellings	3	2	5	84	82	166	8	4	12	—	—	—	95	88	183
Total cases discharged and died during the year	43	33	76	125	128	253	65	54	119	2	4	6	235	219	454
Total cases on Register at 31st December, 1937	481	400	881	579	484	1,063	573	447	1,020	74	58	132	1,707	1,389	3,096

TABLE II.
LENGTH OF RESIDENCE IN MENTAL HOSPITALS OF CASES DISCHARGED RECOVERED, AND OF CASES
WHO DIED DURING 1937.

Length of Residence.	Cartloch.			Woodilee.			Hawkhead.			Stoneyetts.			Totals.		
	Re-		Died.	Re-		Died.	Re-		Died.	Re-		Died.	Re-		Died.
	M.	F.		M.	F.		M.	F.		M.	F.		M.	F.	
Under 1 month	—	—	—	—	—	1	—	—	2	—	—	—	1	—	2
1 to 3 months	—	—	—	1	—	—	2	3	2	2	1	—	4	4	3
3 to 6 months	1	1	—	—	1	—	9	5	—	4	—	1	11	7	5
6 to 9 months	1	5	1	1	—	—	1	1	—	1	—	—	3	6	2
9 to 12 months	—	—	—	1	—	—	3	1	3	3	—	—	3	1	4
1 to 2 years	2	1	2	1	1	1	4	5	3	4	—	—	8	5	10
2 to 5 years	2	—	12	2	—	3	10	2	2	4	2	—	4	2	14
Over 5 years	2	—	8	13	—	27	20	3	—	8	15	—	5	—	48
Totals	8	7	23	20	3	1	33	34	26	15	20	33	2	2	88

TABLE III.

FORMS OF MENTAL DISORDER IN ADMISSIONS, RECOVERIES, AND
DEATHS IN MENTAL HOSPITALS DURING 1937.

Forms of Mental Disease.	Admissions.			Recoveries.			Deaths.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
<i>Inherent Developmental Defects—</i>									
Mental Deficiency—									
(a) Idiocy ...	4	—	4	—	—	—	—	1	1
(b) Imbecility ...	6	2	8	—	—	—	1	3	4
(c) Feeble-mindedness ...	13	13	26	1	1	2	3	—	3
(d) Moral Imbecility ...	5	1	6	4	—	4	—	—	—
Epileptic Insanity ...	19	10	29	2	—	2	5	8	13
Schizophrenia—									
(a) Simple ...	55	16	71	6	3	9	4	6	10
(b) Hebephrenic ...	15	21	36	1	1	2	3	4	7
(c) Katatonic ...	19	16	35	2	—	2	2	3	5
(d) Paranoid ...	8	8	16	—	—	—	—	—	—
Paraphrenia ...	44	18	62	5	2	7	2	2	4
Paranoia ...	3	—	3	—	—	—	1	3	4
Psychoneurosis—									
(a) Neurasthenia ...	—	—	—	—	—	—	—	—	—
(b) Psychasthenia ...	—	—	—	—	—	—	—	—	—
(c) Hysteria ...	—	—	—	—	—	—	—	—	—
<i>Toxic and Confusional Psychosis—</i>									
Manic Depressive Psychosis ...	33	46	79	9	5	14	6	9	15
Acute Delirium ...	—	1	1	—	—	—	—	—	—
Acute Confusion ...	9	10	19	2	3	5	2	—	2
Stupor ...	—	1	1	—	—	—	—	—	—
Alcoholic Insanity—									
Delirium Tremens ...	—	—	—	—	—	—	—	—	—
Mania a Potu ...	—	—	—	—	—	—	—	—	—
Korsakoff's Psychosis ...	—	—	—	—	—	—	—	—	—
Chronic Alcoholic Insanity ...	18	11	29	3	2	5	1	2	3
Cocaine, Morphine, and other									
Drug Insanities ...	1	—	1	—	—	—	—	—	—
Involutional Psychosis ...	2	19	21	1	5	6	6	4	10
<i>Acquired Defects—</i>									
Pre-senile Psychosis ...	4	2	6	—	—	—	3	—	3
Senile Dementia—									
(a) Simple ...	10	15	25	—	1	1	15	22	37
(b) With Mania ...	1	9	10	1	—	1	—	5	5
(c) With Depression ...	—	10	10	—	1	1	2	1	3
(d) With Presbyophrenia ...	—	1	1	—	—	—	—	—	—
General Paralytic Dementia ...	16	7	23	1	—	1	2	3	5
Traumatic Dementia ...	4	1	5	1	1	2	—	—	—
Organic Dementia—									
(a) Tumour ...	—	—	—	—	—	—	—	—	—
(b) Gumma ...	—	—	—	—	—	—	—	—	—
(c) Arterio-sclerosis ...	18	6	24	—	—	—	10	12	22
(d) Meningitis ...	—	—	—	—	—	—	—	—	—
(e) Encephalitis ...	3	1	4	—	—	—	1	—	1
(f) Other Cerebral Diseases ...	2	2	4	—	—	—	6	—	6
(g) Huntington's Chorea ...	—	—	—	—	—	—	1	—	1

In the above table several of the recoveries are "technical recoveries." Any patient discharged from an asylum otherwise than by Minute of the Corporation or by escape must be included in the category of "recovered."

TABLE IV.

CAUSES OF DEATH AT AGE PERIODS, IN MENTAL HOSPITALS DURING 1937.

	AGE DISTRIBUTION.															Grand Total.
	Males.							Females.								
	-20	-30	-40	-50	-60	-70	+70	Total.	-20	-30	-40	-50	-60	-70	+70	
<i>Nervous System—</i>																
General Paralysis of the Insane	—	—	—	1	1	—	—	2	—	—	1	—	1	1	1	4
Organic Brain Disease	—	—	—	—	1	1	—	2	—	1	1	—	1	2	—	5
Epilepsy	—	—	—	1	1	—	—	2	1	—	—	1	3	—	—	5
Exhaustion following Acute Confusional Psychosis	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
Melancholia	—	—	—	—	2	1	—	3	—	—	—	—	—	—	—	—
Exhaustion following Acute Excitement	—	1	—	—	1	—	—	2	—	—	—	—	1	1	—	4
Encephalitis Lethargica	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	1
<i>Diseases of the Circulatory System—</i>																
Hemiplegia	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1
Cerebral Arterio-sclerosis and Softening	—	—	—	—	—	2	—	2	—	—	—	—	1	2	3	6
Cerebral Haemorrhage	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Cerebral Thrombosis	—	—	1	1	—	—	—	2	—	—	—	—	—	—	—	3
Fatty Degeneration of Heart	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2
Myocardial Degeneration	—	—	—	2	3	5	1	11	1	1	—	2	—	5	5	25
Chronic Endocarditis	—	—	—	1	—	1	2	4	—	—	—	—	—	—	—	4
Syphilitic Aortitis	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	1
Cardiac Failure	—	—	—	—	—	—	1	1	—	—	—	—	2	—	—	3
Arterio-sclerosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1

Diseases of the Respiratory

System—

Pulmonary Tuberculosis ...	1	2	—	1	2	—	6	—	1	1	—	—	—	2	8
Acute Lobar Pneumonia ...	—	1	—	—	—	—	1	—	—	—	—	—	—	1	1
Broncho Pneumonia ...	2	—	—	2	2	1	7	—	—	—	3	1	6	13	3
Hypostatic Pneumonia ...	—	—	—	1	—	2	3	—	—	—	—	—	—	1	1
Tuberculous Empyema ...	—	—	1	—	—	—	1	—	—	—	—	—	—	3	3
Chronic Bronchitis ...	—	—	—	—	—	1	1	—	—	—	2	—	2	—	—
Chronic Purulent Bronchitis (Streptococcal) ...	—	—	1	—	—	—	1	—	—	—	—	—	—	1	1
Acute Bronchitis ...	—	—	—	1	—	—	1	—	—	—	—	—	1	2	2

Diseases of the Alimentary

System—

Acute Intestinal Obstruction	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	2	2
Carcinoma of Stomach	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	4
Carcinoma of Intestine	—	—	—	—	1	1	2	—	—	—	—	—	—	—	—	2	2
Paralytic Ileus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Acute Peritonitis	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	1	2
Tabes Mesenterica	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1

Diseases of the Genito-Urinary

System—

Epithelioma of Vulva	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Carcinoma of Uterus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
Uraemia ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Carcinoma of Liver	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1

General Diseases—

Senile Decay	—	—	—	—	—	6	6	—	—	—	1	16	17	23	23	23
Influenza ...	—	—	—	—	1	—	1	—	1	3	—	3	8	9	9	9
Septicaemia ...	—	—	—	1	—	—	1	—	—	—	—	—	—	1	1	1
Tubercular Adenitis	—	—	—	—	1	—	1	—	—	—	—	—	—	1	1	1
Generalised Carbuncles	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—
Shock from Fracture of Femur ...	—	—	—	—	—	—	—	—	—	—	—	1	1	1	1	1

1	4	4	9	20	19	19	76	3	3	5	9	16	18	34	88	164
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TABLE V.

PROBABLE CAUSES OF INSANITY IN PATIENTS ADMITTED TO
MENTAL HOSPITALS DURING 1937.

Etiological Factors.				Males.	Females.	Total.
1. Mental Stress	...	...	...	50	37	87
2. Adolescence	...	...	...	26	15	41
3. Pregnancy	...	...	...	—	3	3
4. Puerperium	...	...	...	—	6	6
5. Climacteric	...	...	...	4	27	31
6. Senility	...	...	...	12	32	44
7. Bodily Ill-health and Exhaustion				12	6	18
8. Alcoholism	...	...	...	43	13	56
9. Syphilis	...	...	...	17	11	28
10. Constitutional Inferiority	...			56	27	83
11. Organic Brain Disease	...			8	6	14
12. Epilepsy	...	...	...	14	10	24
13. Disorders of Ductless Glands	...			1	1	2
14. War Strain	...	...	...	8	—	8
15. Congenital	...	...	...	9	13	22
16. Encephalitis Lethargica	...			3	1	4
17. Injury	...	...	...	7	4	11
18. Previous Attack	...	...		20	22	42
19. Huntington's Chorea	...	...		—	—	—
20. Acute Infective Illness	...			5	2	7
21. Deprivation of Special Senses				—	—	—
22. Unascertained	...	...	...	17	11	28
				<u>312</u>	<u>247</u>	<u>559</u>

In connection with this table, it should be borne in mind that in the causation of every mental illness there are many factors, each and all of which may have a distinct influence in precipitating the mental disorder. Such factors as personality, domestic and economic conditions, state of bodily health, and many others must be considered when assessing the probable cause of the condition. In this table the cause assigned in each case, although merely one of many factors, has been adjudged to have had an important bearing on the development of the illness.

Under the heading "Mental Stress" are included such conditions as domestic or business worries, adverse circumstances, etc., while under "Bodily Ill-health" are included malaria, influenza, gastric troubles, rheumatism, and the like.

GARTLOCH MENTAL HOSPITAL, GARTCOSH.

The number of patients on the Register on the 31st December, 1937, was 481 males and 400 females, and the average daily number for the year was 880 (478 males and 402 females), the corresponding figure for 1936 being 880 (479 males and 401 females). 49 male patients and 30 female patients were admitted during the year; of these 28 males and 2 females were admitted from H.M. Prisons. During the year there were 43 deaths (23 males and 20 females), representing a percentage of 4.9 on the average daily number. The number of deaths in a full year has been lower only once in the history of the institution (38 in 1935).

During the year difficulty was experienced for the first time in obtaining a sufficiency of suitable candidates for the female nursing and domestic staffs. In previous years the numbers applying have permitted of a careful selection being made, but in 1937, owing to the shortage of applicants, a less rigorous discrimination was exercised, with the consequence that there was a larger wastage during the period of probationary service. This is reflected in the subjoined tables showing the numbers of the probationary and established members of the nursing staff leaving in the years 1935, 1936 and 1937. It will be noted that the numbers of established staff show little variation, whereas in 1937 there is a marked increase in the number of probationers leaving.

NUMBERS OF MALE AND FEMALE NURSES WHO LEFT THE SERVICE DURING THE YEARS ENDING
DECEMBER 1935, 1936 AND 1937.

Cause of Leaving—	1935.						1936.						1937.					
	Pro-bationary.			Estab-lished.			Pro-bationary.			Estab-lished.			Pro-bationary.			Estab-lished.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Resignation	—	3	3	1	7	8	—	7	7	—	13	13	—	24	24	1	12	13
To be married	—	—	—	—	8	8	—	—	—	—	6	6	—	—	—	—	9	9
Expiry of temporary or probationary service	2	3	5	—	—	—	—	7	7	—	—	—	9	—	9	—	—	—
Ill-health	—	—	—	3	2	5	—	3	3	—	2	2	—	1	1	—	1	1
Left without notice	—	—	—	—	—	—	—	—	—	—	—	—	1	2	3	—	1	1
Dismissed	1	—	1	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—
Died	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
On Superannuation Allowance	—	—	—	1	1	2	—	—	—	1	—	1	—	—	—	—	1	—
Given notice	—	2	2	—	—	—	—	—	—	—	—	—	—	3	3	—	—	—
Total	3	8	11	5	18	23	—	17	17	1	21	22	10	31	41	3	23	26

Nursing Certificate.—At the examination of the Royal Medico-Psychological Association held in May and November, 1937, 13 female and 9 male nurses passed the preliminary examination, and 9 female nurses and 1 male nurse the final examination.

Staff Changes.—In the Spring of the year Dr. John R. Robb, Deputy Medical Superintendent, who had been in the service of the institution since 1919, left on his appointment as Medical Superintendent of Woodilee Mental Hospital. He carried with him the good wishes of both patients and staff. Dr. Thomas Muir Wilson, the Senior Resident Medical Officer, was appointed Deputy Medical Superintendent in Dr. Robb's place. Dr. William Mallinson, Junior Resident Medical Officer, was promoted to the Senior post, and Dr. Robert A. Murphy was appointed to the vacancy. Miss Annie Park was appointed Junior Assistant Matron, in place of Miss Margaret Carle, who resigned through ill-health.

Entertainments.—The patients were amply provided with entertainments. In addition to the usual weekly entertainments, three combined variety entertainments and dances were provided by the Corporation. Large parties of patients visited the Kelvin Hall Carnival and several of the Christmas Shows at the theatres. During the summer months parties of patients were conveyed by motor buses to such places as Loch Lomond and Loch Lubnaig, where they enjoyed picnics and games.

Works Department.—The work of re-conditioning the sanitary annexes of the four wards in the Male Asylum block was continued during the year, and one only now remains to be renovated.

The low pressure hot water heating system in the Sanatorium pavilion, which had been unsatisfactory for many years, failing to maintain an adequate temperature during the winter months, was inspected by a heating engineer, who made certain recommendations, which have been put into effect. The alterations, which included the installation of a small electric pump to aid the circulation of the water, have resulted in a marked improvement in the heating at a comparatively small cost.

Towards the end of the year a start was made with the excavation of the site for the new Nurses' Home.

A. M. DRYDEN,

Medical Superintendent.

HAWKHEAD MENTAL HOSPITAL.

The number of patients on the register at 31st December, 1936, was 885 (499 males and 386 females).

Admissions, Recoveries and Deaths.—During the year 254 patients were admitted, of whom 139 were males and 115 females; 15 males and 7 females were re-admissions. This high admission rate was rendered possible by the extra accommodation provided in the new hospital. The average daily number resident during the year was 526.4 males, and 410.5 females, a total of 936.9. The number of patients discharged recovered was 41, consisting of 26 males and 15 females. The percentage of recoveries calculated on the number of admissions was 16.1 per cent. This is an unusually small recovery rate, but it is to be accounted for by the fact that many of the patients, who were admitted after the opening of the new hospital, were in an advanced stage of mental illness, and had already been under treatment for a considerable time in observation wards and elsewhere without success. The total number of deaths was 53 (20 males and 33 females) representing a percentage of 5.6 of the daily average number of patients resident during the year.

Service Patients.—On 31st December, 1936, there were 39 Service patients, whose maintenance charge is met by the Ministry of Pensions, and 4 ex-Service patients, whose maintenance is paid by the General Board of Control. During the year, 1 Service patient was admitted from Woodilee Mental Hospital, and 2 were transferred from the ordinary list to the Service list; 2 were discharged recovered, and 2 died, leaving on the Register at 31st December, 1937, 38 Service patients.

Staff.—The changes amongst the staff during the year were as follows:—

	Males.	Females.	Total.
Engaged	71	125	196
Resigned voluntarily	23	61	84
Ill-health	—	3	3
Left without notice	3	10	13
Inefficient or unsuitable	1	2	3
Services no longer required	5	—	5
Dismissed	3	6	9
Died	—	1	1

The large addition to the staff was necessitated by the alteration in the hours of duty of both nursing and domestic staffs, now reduced to an eight-hour day, or 48 hours per week.

Nursing Certificates.—During the year, 3 female nurses and 3 male nurses passed the final examination and gained the certificate in mental nursing of the Royal Medico-Psychological Association, and 14 female nurses and 10 male nurses passed the preliminary examination. 1 male and 1 female nurse passed the final examination of the General Nursing Council of Scotland. The total number of certificated mental nurses on the staff now is 70.

Entertainments.—During the winter months, entertainments were provided at least twice weekly in the form of dances, cinematograph shows, concerts, and theatrical performances. A large party of patients was entertained at the Christmas Carnival in the Kelvin Hall, also at the Christmas Show at the King's Theatre, and the Theatre Royal Pantomime, under the auspices of the Corporation of Glasgow. A large number of patients enjoyed the Pantomime at the Princess Theatre on the kind invitation of the Manager of this Theatre. Thanks are also due to the "Tabs," the "Overseas League," the "Pollokshields," and the "Glasgow Players'" Dramatic Clubs, also the S.C.W.S. Choir and Orchestra, for their performances.

JAMES H. MACDONALD,

Medical Superintendent.

WOODILEE MENTAL HOSPITAL, LENZIE.

Movement of Population.—On 31st December, 1937, the number of patients on the register was 1,063 (579 males and 484 females) as compared with 1,228 (656 males and 572 females) at the end of the previous year, showing a decrease of 77 males and 88 females. The average daily number of patients resident during the year was 616 males and 520 females, a total of 1,136. The total number of admissions during the year was 88 (48 males and 40 females) as compared with 92 (43 males and 49 females) during the previous year, being a total decrease of 4. The total number of discharges for the year was 186. Of this number 4 cases (3 males and 1 female) were discharged as recovered; 16 cases (5 males and 11 females) were discharged as relieved; 2 cases (1 male and 1 female) were boarded-out, and 164 cases (83 males and 81 females) were transferred to other establishments. The deaths numbered 67 (33 males and 34 females) as compared with 36 males and 31 females, the total being the same as for the previous year. This, as stated in last year's report, is the lowest number of deaths since 1900.

Principal Forms of Mental Disorder on Admission.—Schizophrenia was present in 29 cases (17 males and 12 females); Mental Deficiency plus Psychosis in 13 cases (9 males and 4 females); Manic Depressive Psychosis in 8 cases (3 males and 5 females); Alcoholic Insanity in 6 cases (5 males and 1 female); Epileptic Insanity in 6 cases (4 males and 2 females); Involutional Psychosis in 5 females; General Paralytic Dementia in 4 males; Senile Dementia in 4 females.

Causes of Mental Disorder.—The outstanding probable factors, ascertained to be either predisposing or exciting causes of the mental breakdown, in those admitted, were as follows:—Alcohol in 23 cases; Mental Stress (including domestic or business worry, adverse circumstances and unemployment) in 21 cases; Syphilis in 6 cases; Previous Attack in 6 cases; Hereditary predisposition in 5 cases.

Accommodation.—Overcrowding in all sections of the institution is still present and is a source of much anxiety to the staff.

General Health.—The general health of the patients and staff has been on the whole good. In February, 1937, an outbreak of dysentery affecting mainly Female Divisions 5 and 6 occurred. About 20 patients were affected; these were immediately isolated in a hospital ward which was cleared for the purpose, and they recovered in a very short time. Owing to this prompt isolation and other protective measures employed throughout the whole Female side of the Institution, the outbreak was successfully checked, and there has been no further recurrence of the disease. All these original cases of dysentery are of course still isolated.

Service Patients.—There were 39 Service patients in residence on 31st December, 1937, as compared with 40 Service patients last year, 1 having been classified as a Service patient, 1 having died and 1 having been transferred. Of the 39 patients, 34 were paid for by the Ministry of Pensions, and 4 were paid for by the General Board of Control from a special Exchequer Grant.

Patients' Entertainments.—Charabanc drives to places of interest were greatly enjoyed by the working patients during the summer months. On Coronation Day patients had a special motor run round Glasgow to see the decorations and illuminations. The usual weekly dances and cinema programmes were held during the winter—the “Talkie” pictures continuing to be a source of great enjoyment. Three concert entertainments arranged by the Corporation, and one entertainment by the children of Miss M’Keller’s Dancing School, were greatly appreciated by the patients.

Staff.—Dr. Alexander Dick, Assistant Medical Superintendent, was appointed Medical Superintendent at Stonevetts Mental Hospital on 31/1/1937, and Dr. D. Hardie Williamson, Senior Resident Medical Officer, was later appointed there also. The following members of the staff retired on pension during the year ended 31st December, 1937. In each case their services to the hospital are acknowledged with appreciation:—

- Thomas Cosgrove, engineman, after 33 years’ service.
- Robert Stirling, painter, after 35 years’ service.
- William Shanks, joiner, after 28 years’ service.
- Robert Mitchell, vanman, after 22 years’ service.

With regret the death of Mr. Alfred Coupe, Head Attendant, is recorded. Mr. Coupe died suddenly in his office while on duty. He was a member of the staff for 30 years. He was on Active Service during the War, and was a good soldier and a popular and efficient official. The death of Nurse Elizabeth M. F. Gourlay, is also recorded with regret.

A considerable number of assaults have been made on members of the staff by patients. Where so many irritable and turbulent patients are living together this is to be expected.

Royal Medico-Psychological Association Examinations.—In May, 1937, 13 nurses and 4 attendants passed the Preliminary Examination, and 5 nurses and 1 attendant the Final Examination. In November, 1 nurse and 1 attendant passed the Preliminary Examination.

Reception House and Sanatorium.—These buildings were demolished in September and plans for new buildings have already been approved. The plans make provision for a complete Reception Hospital, Sanatorium and nurses' residence, accommodating 124 patients and the necessary staff with the exception of kitchen staff. This work is being undertaken by the Public Health Department.

Nurses' Home.—The building of the extension to the Nurses' Home was begun in March, 1937, and steady progress is being made. On completion it will contain individual bedrooms for 112 nurses. Excellent facilities are being provided in each room comprising wash-hand basin, hot-water radiator and a built-in wardrobe. A spacious common room for nurses' recreation and general welfare forms part of the extension. The heating of the existing Nurses' Home is being completely renewed on the lines of the new extension.

Works Department.—Steady progress has been made on the re-wiring of the institution, two-thirds of which is completed. The local generating plant will, of course, continue in use until conversion is complete. The use of conduit tube for the re-wiring of the institution has involved the dismantling of the present wood casing, and in consequence has necessitated repair of walls and re-decoration on a large scale throughout. In particular the dining hall has been re-decorated with blended effects. Owing to the continuous demands

throughout the years for beds for bed patients, wards and dormitories which were built for ambulatory patients, have gradually been taken over as hospital wards. To meet the changing situation it became necessary to install sanitary equipment suitable for bed wards. Excellent progress is being made with the entire modernising of bathrooms throughout the institution. The work consists of providing concrete floors in place of wooden ones. New sanitary fittings include ranges of urinals, lavatory basins, slunges, baths and sinks. During the past few years the heating system in Divisions 1, 2, 3, and 4 and hospitals—male and female—has been entirely renewed with satisfactory results. It is intended to proceed with the final instalments of the work during the coming year.

Dental Surgery and Workshop.—A temporary surgery and workshop have been equipped in the Institution laboratory. The workshop is the centre for the making and repairing of artificial dentures from all mental institutions under the Public Health Department. Two dental mechanics are employed. Provision has been made in the plans of the new Reception Hospital and Sanatorium for more suitable quarters for dental work, and when completed the present services will be transferred there.

On the male side a larger room for patients' visitors has been utilised, and has been re-decorated and panelled with plywood. A separate door-way leads into the garden where patients and their visitors can sit when the weather permits. Work has started and a complete new scullery is being built on the female side, to relieve the congestion in the scullery on the male side, serving the main dining hall. Stainless steel sinks and galvanised plate racks are being fitted. An up-to-date vegetable scullery has been provided adjacent to the butcher's shop to relieve congestion at the main kitchen.

A new motor lorry has been provided for general use and to cope with the laundry traffic throughout the Institution, the furthest off farm being two miles away. An enclosed dust cart was also provided to remove refuse from all parts of the Institution, and the many houses on the estate, also to distribute coal.

Owing to the lack of pressure, and the increased demand for water for the new housing schemes in the district, there has been

a relative scarcity of water at Woodilee. This is more evident in the upper dormitories and in the staff houses at Fauldhead. The matter is having attention.

Since about 600 male patients have to be shaved at least twice weekly, a barber's shop had to be installed to meet pressure of work. Many of the patients have indicated that they would like to be shaved more frequently, but at present this is not possible, except in a relatively small number of cases.

General.—I would especially record appreciation of the work of Miss M'Lean, who is responsible for all statutory records and documents, and the secretarial work of my office. Owing to changes in clerical staff she has had a particularly harassing year. All official records and documents have been kept up-to-date, and to achieve this she has willingly worked many hours in excess of her hours of duty. Throughout the year the officials and staff have been active, efficient and loyal to the Public Authority. The discipline has been good, and all persons living on the estate appear to be orderly and contented.

JOHN R. ROBB,
Physician Superintendent.

STONEYETTS HOSPITAL, CHRYSTON.

On 31st December, 1937, the number of patients on the Register was 132 consisting of 74 males and 58 females. The number of cases admitted during the year was 138 (76 males and 62 females), and the number of patients discharged recovered was 2 males and 2 females; 1 female patient was discharged relieved, and 1 female patient died.

This Hospital was opened as an Asylum for certified mental patients on 7th August, 1937. The first patients admitted were those transferred from the Reception House and Sanatorium at Woodilee, and they occupied the two Villas available after the reconstruction work which had commenced at the beginning of the year. About the end of October the other two Villas were ready, and they have been gradually occupied by new admissions. Occupancy of these two latter Villas would have been at a quicker rate had the necessary staff been forthcoming.

Villas.—A great deal of reconstruction work has been necessary to make the Villas suitable for patients requiring hospital treatment. In two Villas there are three observation wards, and one non-observaton ward. In the other two there are two observation wards, one non-observation ward, and a day-room. I would suggest the addition of a bathroom and a verandah to each of the large wards.

Nurses' Home.—One Villa has been reconstructed and converted into a temporary Nurses' Home. The cubicle system here is not satisfactory, and it is to be hoped that the building of a permanent Nurses' Home will not be delayed. There is at present only one sitting-room available, common to all grades of nurses and maids. The male nurses' living-in rooms are in too close proximity to the wards.

Entertainments.—The weekly Cinema Show is the most popular form of entertainment, and excellent programmes are being submitted. The Concert Parties arranged by the Corporation are anticipated and greatly enjoyed. The Stoneyetts Concert Party consisting of the kitchen staff and two female patients under the able and enthusiastic tuition of Miss Whitelaw (Kitchen Superintendent) and Miss Levack, gave two excellent concerts, which were highly appreciated by patients and staff.

Buildings.—Much work is still necessary to bring this Hospital up to modern standard. The kitchen and laundry equipments are inadequate and out-of-date. It is anticipated that these two departments will benefit when the Clyde Valley Company supplies the power. A new Hospital telephone system will soon be completed. The Works Department will be kept fully employed with the many alterations still to be completed during the coming year.

Staff.—The recruitment of a nursing staff for a new Mental Hospital is a difficult matter, requiring much thought and consideration, and it is gratifying to record that the Hospital has an efficient staff, whose loyal co-operation has been most helpful and much appreciated.

ALEXANDER DICK,
Medical Superintendent.

LENNOX CASTLE CERTIFIED INSTITUTION.

The total number of patients on the Register shows an increase of 422 from last report.

	Males.	Females.	Total.
On Register, 31st December, 1936 ...	298	268	566
Admissions	229	228	457
Discharges	9	7	16
Deaths	10	9	19
On Register, 31st December, 1937 ...	508	480	988

*Admissions—**From—*

Stobhill Hospital	12	15	27
Southern General Hospital ...	58	51	109
Barnhill Hospital	1	2	3
Eastern District Hospital ...	—	3	3
Caldwell House Certified Institution	46	88	134
Royal Scottish National Institution, Larbert	32	20	52
Waverley Park Institution ...	—	7	7
Baldovan Institution	8	3	11
Broadfield Institution	1	—	1
Perth Poorhouse	1	—	1
Dunclutha Home	2	7	9
St. Joseph's Certified Institution ...	2	—	2
St. Charles' Certified Institution ...	13	2	15
Perth State Institution	2	—	2
Royal Infirmary	—	1	1
Barlinnie Prison	15	—	15
Gartloch Asylum	1	—	1
Woodilee Asylum	8	15	23
Hawkhead Asylum	1	—	1
Westhorn School	1	—	1
Kibble School, Paisley	1	—	1
Own homes	24	14	38
	<u>229</u>	<u>228</u>	<u>457</u>

Discharges—

To other Institutions	3	3	6
To care of friends	3	4	7
Expiry of Certificate	3	—	3
	<u>9</u>	<u>7</u>	<u>16</u>

During the year many transfers of patients took place from other Institutions, particularly from the Southern General Hospital, Caldwell House Certified Institution, the Royal National Institution, Larbert, and from Blinkbonny Certified Institution, Falkirk.

There has been a preponderance of mentally low grade and helpless patients in these admissions, indeed more than was anticipated, and this factor has made complete classification difficult, besides slowing up schemes of development and certain work which is usually performed by high grade able-bodied inmates. Before the end of the year, however, all the Male Workshops were occupied and also several of the Female Workshops. Much work was done in the garden and grounds, particularly in the former, where a substantial start was made in the formation of a kitchen garden. Several hundred young trees were planted along the roadways, and the formation of an extra football pitch was proceeded with. The outdoor swimming pool was completed early in the year, and was available during the summer months. A garage for the fire van was constructed in proximity to the married quarters at Netherton Oval. Cooking appliances have been installed in the Nurses' Home, and this has contributed considerably to the comfort of the female nursing staff, as formerly they had to proceed to the main refectory block for meals.

General Health.—The health of the patients and staff has been very good, and there was no occurrence of any epidemic disease.

Staff.—The difficulty of obtaining suitable female staff is present here as in most other Institutions, but latterly there has been an increase in the number of candidates. The Institution has been recognised as a Training Centre by the General Nursing Council and the Royal Medico-Psychological Association, and at the May and November Examinations of the Royal Medico-Psychological Association, two nurses passed the Final Examination, while 20 passed the Preliminary Examination. The accommodation for male nursing staff living-in was found to be inadequate, and it was necessary to use one block of houses at Netherton Oval as a Hostel. This arrangement while it has worked very satisfactorily will only continue until the houses are required for married staff.

Entertainments.—The patients have been very adequately provided for by various entertainments. The visits to the Kelvin Hall and Pantomimes arranged by the Public Health Department, were very much enjoyed. The weekly Dances and weekly Cinema Entertainments were continued throughout the winter months, and

Concert Parties visited at frequent intervals. The patients' Concert Parties, both male and female, were again formed, and were ready to give their performances after the New Year. Football Matches were played with outside teams, and several Hockey Matches were arranged for the girls. During the summer the Swimming Pool was much appreciated by patients and staff, and was almost daily utilised. A Swimming Gala was held in August, and about 60 male patients and staff participated in the events. The Annual Sports were held on 3rd August, and were very successful.

C. G. A. CHISLETT,
Medical Superintendent.

CALDWELL HOUSE CERTIFIED INSTITUTION, UPLAWMOOR, RENFREWSHIRE.

Change of Administration.—From the date of its opening in June, 1929, until April, 1937, Caldwell House served as an institution for certified adult mental defectives. In April, 1937, after the opening of a certified institution for adult mental defectives at Lennox Castle, the patients in Caldwell House were transferred to that institution. Caldwell House thereafter became an institution for juvenile mental defectives, the administration being transferred from the Public Assistance Committee to the Committee on Health.

The juvenile patients of both sexes have all been accommodated in the old mansion house of Caldwell. The boys' home was not available for defective patients because under a temporary arrangement it had been assigned for the accommodation of aged blind persons so that it was not in practice part of the institution.

The patients admitted thus far have all been regarded as ineducable. No school has been provided and no special teachers; nevertheless, under the guidance of the Matron, Miss Mary Young, and her staff a great deal has already been achieved in improving the mental and physical health of the inmates. The nursing staff has carried on a little school of which the particulars are as follows:—

Junior class consisting of five boys and seven girls are taught—Alphabet, phonetic sounds; counting on ball frames; speech training; sense training; paper folding; nursery rhymes and plays; and personal hygiene.

Senior class consisting of ten boys and eight girls are taught—Reading; arithmetic; writing; drawing and painting; poetry and singing; dancing; plasticine modelling; and personal hygiene.

The following figures relate to the number and movement of patients throughout the year:—

Number of female patients on Register at 31/12/36	...	90	
Number of male patients on Register at 31/12/36	...	49	
Number of female patients on Register at 31/12/37	...	31	
Number of male patients on Register at 31/12/37	...	49	
Number of female patients admitted during 1937	...	34	
Number of male patients admitted during 1937 ...	...	53	
Number of female patients discharged during 1937	...	89	
Number of male patients discharged during 1937	...	50	
Number of female patients died during 1937	...	4	
Number of male patients died during 1937	...	2	
Admissions.	Male.	Female.	Total.
From—			
Woodilee	12	7	19
Dunclutha	15	15	30
Southern General Hospital	4	3	7
Stobhill Hospital	6	2	8
R.S.N.I.	2	2	4
Baldovan Certified Institution	2	—	2
Broadfield Certified Institution	1	—	1
Lennox Castle Certified Institution	—	1	1
Own Homes	11	4	15
	<hr/> 53	<hr/> 34	<hr/> 87

Entertainments.—During the year entertainments were provided and were much enjoyed by the patients and staff. These consisted of two concerts, a New Year entertainment, a Christmas tree and children's party, and a visit to the pantomime in the Princess Theatre, Glasgow.

STAFF CHANGES.

	Male.	Female.	Total.
Number of employees at 31/12/36	16	21	37
Number of employees at 31/12/37	12	35	47

During 1937 several members of the staff were transferred to Stoneyetts and Lennox Castle Institutions, while 64 new members were engaged including the Matron Superintendent, Miss Young.

JAMES H. MACDONALD,
Medical Officer.